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U.S. Department of
Homeland Security

United States
Coast Guard



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FOIA 2021-CGFO-00265

This is the final response to your October 10, 2020 Freedom of Information Act (FOIA) request, for a copy of the following information related to Delivery Order 70Z02320FGPH02600:

1. Copy of the most recent Strategic Master Plan (SMP) of the National Coast Guard Museum.

Your request was received in this office on March 30, 2021.

On April 6, 2021 the Coast Guard confirmed with FOIA Professional Service that Personally Identifiable Information (PII)(b)(6) and Coast Guard Accounting/Appropriations Data were not part of this request. Therefore, all PII and Coast Guard Accounting/Appropriations Data have been redacted pursuant to 5 U.S.C. § 552 (b)(6).

A search of the Management Information System for documents responsive to your request produced a total of 483 pages. It has been determined that 22 pages are withheld in their entirety pursuant to 5 U.S.C. § 552 (b) (5) and 26 pages are partially withheld pursuant to 5 U.S.C. § 552 (b) (4).

Enclosed are 460 pages with certain information redacted as described below:

- a. **FOIA Exemption 4** - protects commercial or financial information obtained from a person that is privileged or confidential. The courts have held that this protects (a) confidential commercial information, the disclosure of which is likely to cause substantial harm to the competitive position of the person who submitted the information and (b) information that was voluntarily submitted to the government if it is the kind of information that the provider would not customarily make available to the public. This exemption permits withholding of unit prices and various labor and overhead rates provided by the successful contractor who received the award.
- b. **FOIA Exemption 5** - Documents are being withheld under 5 U.S.C. 552(b)(5) because they contain agency deliberations that do not reflect the final agency decision and disclosure would discourage open and frank discussions in future deliberations and would

cause public confusion resulting from disclosure of reasons that were not ultimately the grounds for the agency's action .

You have a right to appeal this denial. Should you wish to do so, you must send the appeal and a copy of this letter, within 90 days of the date of this letter, to:

COMMANDANT (CG-6P)
US COAST GUARD
ATTN: FOIA/PA OFFICER
FOIA APPEAL
2703 MARTIN LUTHER KING JR AVE SE STOP 7710
WASHINGTON DC 20593-7710

Following the procedures outlined in the DHS regulations at 6 C.F.R. § 5.9., your envelope and letter should be marked "FOIA Appeal." Copies of the FOIA and DHS regulations are available at www.dhs.gov/foia.

Should you have any questions, please contact our office, refer to FOIA 2021-CGFO-00265 on any communications with our office.

Sincerely,

ONEILL.KEITH.JAMES
S.1363597919

Digitally signed by
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Keith J. O'Neill
Head of the Contracting Activity
U. S. Coast Guard Acquisition Directorate

Enclosure(s): 2017 SMP; 2020 SMP; (460 pages)



Addendum 2017 to the Strategic Master Plan

**For the National Coast Guard Museum
New London, Connecticut**

May 15, 2018

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Addendum 2017 to the Strategic Master Plan
For the National Coast Guard Museum
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May 15, 2018

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The illustrations and plans inserted throughout this document are from Payette’s Architect’s Schematic Design for the National Coast Guard Museum, completed in May 2018, just as this document was going to press. These recent designs are for a larger building (c. 80,000 sq. ft.) than their earlier design in December, 2017 (68,325 sq. ft.), which is the basis for the budgets in this *Addendum* .17. The size and layout are likely to keep evolving during design development.

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Summary Description of the Museum

National Coast Guard Museum



This summary of the Strategic Master Plan for the planned National Coast Guard Museum touches on all aspects of the Museum, with a focus and more detail on the Coast Guard's post-opening operations. This overview introduces the Museum to managers and new team members. The summary reflects the original 2008 plan as amended by both the 2014 and 2017 addenda. Please refer to these documents for considerably more detail.

The new National Coast Guard Museum, under development in New London, CT for 2022, will be an educational institution connecting the Coast Guard community to many other communities and to the public. Through participation in its programs and events and by serving the public as a bridge to the story of the US Coast Guard, it is the goal of the new, waterfront Museum to act as the Coast Guard's international public platform and welcome center.

Admiral Paul F. Zukunft, Commandant of the Coast Guard said "The National Coast Guard Museum will celebrate the past, present, and future accomplishments of this great service." Five suites of galleries will focus on the history of the Coast Guard and its current and future activities. These free museum galleries will be complemented by a feature theater, event spaces,

learning laboratories, a gift shop, and support facilities, as well as outdoor plazas and water-related activities, all by the berth of the USCGC *Eagle*.

In addition to "telling the story" and building awareness of all that the Coast Guard does, the experience of the Museum and its programs will help strengthen the bonds among Coast Guard communities in both practical and emotional ways. The Coast Guard is proud of its story, and by telling it well, that pride will translate into a new generation's interest in supporting and even joining the Coast Guard. As global shipping becomes more important, as homeland security becomes more precious, and as our spectacular environment becomes more threatened, the Coast Guard's story becomes more important and public support for its efforts more critical. The Museum can be a place where the Coast Guard can engage citizens in assisting homeland security, by showing them how they can do their part and by providing them useful training.

The vision looks beyond opening day to a healthy operating institution, successful because of the value of the services the Museum will offer its constituents, both public and private. The institution needs a believable and a realistic economic model to guide operations with careful, strategic planning.

The Museum will be operated by a combination of Coast Guard personnel, NCGM Association employees and volunteers; together, all aspects of a sophisticated museum will be covered. As the Coast Guard personnel are precluded from certain kinds of activities, the Association employees will operate revenue centers, raise money, and interact with commercial sponsors. The Coast Guard must ensure that the assignment of personnel to the Museum effort does not violate the statutory restrictions of 14 USC 98¹, the enabling legislation.

In addition to what it can do for the Coast Guard, the Museum can help bring tourists into New London, and it can have a positive economic impact on the city. Museum programs, especially during the winter, may be helpful in building community bonds. The Museum can certainly add to the quality of life, and its operation should be flexible enough to shift from serving tourists in the summer to gathering residents during the winter.

The resources and facilities described in this *Plan* are designed to help the Museum achieve its objectives even though the organization and its programs are bound to change dramatically over time.

Planning History

The National Coast Guard Museum ("NCGM" and "the Museum") has been under consideration for many years, with numerous creative and curatorial solutions. Considerable effort has gone into site selection and analysis.

The idea has been kept alive because it is fundamentally sound and a good fit between the Coast Guard and the community. A capital campaign and economic model have been defined for a

¹ 14 USC 98: Secretary shall not expend any funds appropriated to the Coast Guard on the engineering, design, or construction of any museum established under this section.

The Secretary shall fund the operation and maintenance of the National Coast Guard Museum with nonappropriated and non-Federal funds to the maximum extent practicable. The priority use of Federal operation and maintenance funds should be to preserve and protect historic Coast Guard artifacts, including the design, fabrication, and installation of exhibits or displays in which such artifacts are included.

compact 68,325 SF Museum, and there are initial commitments, including from the State of Connecticut. The Army, Air Force, Navy and Marines have significant national museums (see Table 1), which have been sufficiently successful that expansions are planned. Now may be the time for the Coast Guard to complete the circle of five national military service museums. Additionally, the National Coast Guard Museum will join a collaborative community of other maritime and military museums around the world.

Related Museums & Maritime Institutions

National Coast Guard Museum

Military Museums		Eastern Connecticut's Maritime Sites
International Association of Arms & Military History Museums (IAMAM)	Number not available	Mystic Seaport Museum
American Alliance of Museums (AAM)	435 Military Museums	Mystic Aquarium
Count of Military Museums		Avery Point, UConn Sea Grant Program
		USS Nautilus & Submarine Force Museum
Maritime Museums		Maritime Program at Connecticut College
American Alliance of Museums (AAM)	196 Maritime, Naval Museums and Historic Ships	Mitchell College
count of Maritime Museums		US Coast Guard Academy
		US Coast Guard Research and Development Center
Selected National Military Service Museums		
National Museum of the Marine Corps		
National Naval Aviation Museum		
National Museum of the United States Air Force		
National Museum of the United States Navy		

Table 1

Source: American Association of Museums, Institute of Museum & Library Services, and White Oak Associates, Inc.

The *Strategic Master Plan* and its *Addenda* address the Coast Guard's need to comply with 14 USC 98 to quantify its operating costs and projected annual commitment of Coast Guard funds after opening.

Research and Policy Guidance

Successful museum planning is founded on addressing significant needs. Museums grow and adapt in response to providing needed services to families, professionals, students, teachers, businesses, foundations, agencies and others. Assessing what the community needs is a key element of strategic planning. In the case of National Coast Guard Museum, there is both a national Coast Guard-related community and the regional community in which the central hub and public facility of the National Coast Guard Museum will be located.

To undertake this research and to develop a *Strategic Master Plan*, the United States Coast Guard commissioned White Oak Associates, Inc., a Massachusetts-based museum planning firm, in 2008 to interview community leaders in the two communities and to develop the foundations of the Museum's plan in just sufficient detail to be able to identify the required Coast Guard annual support, leaving the detailing of the *Plan* to a Coast Guard team working with an expanded creative and curatorial team. The Museum Oversight Group (Table 2) and twenty-eight other leaders and community spokespeople were interviewed to identify significant community needs and to explore how the Museum might be a partial solution to those needs.

Museum Oversight Group (2008)

National Coast Guard Museum

Vice Commandant Vivien Crea	RADM Dale G. Gabel
RADM Clifford Pearson	RDML Mary Landry
RDML William D. Baumgarten	RDML Keith Taylor
CDR Winston Leslie [project officer]	CAPT Thomas P. Ostebo Exec. Asst. to the Commandants
Dr. Robert M. Browning, Jr. (Ph.D.) – Coast Guard Historian	

Table 2

Source: United States Coast Guard

Richard Grahn of the National Coast Guard Museum Association and Anne Brengle of the US Coast Guard Foundation, both liaisons to the group, provided additional input.

The *Strategic Master Plan* is the result of that commission, and it should be read in the context of the purpose of the commission, which is to inform the Coast Guard's go/no go decision on providing ongoing financial support for the Museum. This *Plan* follows the Museum Oversight Group's policy guidance.

Conceptual Framework

A museum's *conceptual framework* translates the research and policy guidance into mission and purposes that state what the Museum is trying to accomplish and for whom, in what ways, and with what support. It is the collection of ideas that guide the Museum. The Museum's *conceptual framework* includes the following sections: Mission; Intentional Purposes; Guiding Principles; Audiences, and Supporters.

Mission and Intentional Purposes

All interviews pointed to the same top priorities: Increase awareness of the United States Coast Guard; tell the story, and build engagement. The policy direction indicates that the Museum's secondary purposes are to provide public education, promote enlistment to the Coast Guard, support the Coast Guard family's activities and build public support for the Coast Guard's programs.

Mission (2014 Published Statement)

“To build awareness and appreciation of the United States Coast Guard and engagement with its programs by exploring the Coast Guard’s rich history, current life and future potentials through interactive public exhibits, theaters, programs, partnerships and other museum-quality learning experiences.”

The US Coast Guard developed the approved mission statement previously published in the *Strategic Master Plan* and its *Addendum '14*. Throughout 2017 the Museum Exhibit Advisory

Panel (MEAP) worked to refine this mission, and develop a vision statement, with the following published in the *Preliminary Master Interpretive Plan* in May 2017:

“Mission: The National Coast Guard Museum will engage the public with a variety of artifacts, exhibits, interactive experiences, and educational programs designed to celebrate the Coast Guard men and women and their accomplishments in the past, present, and future.

Vision: The National Coast Guard Museum will inspire, inform, and engage visitors by honoring the courage and skill of the men and women of the United States Coast Guard.”

“The National Coast Guard Museum Association (NCGMA) is a 501c3 Non-Profit Charitable Organization formed in 2001 to raise funds and apply for and administer federal and state grants for the sole purpose of acquiring land, designing, constructing, developing exhibits and turning over to the US Coast Guard a national museum in the City of New London, Connecticut.”

Intentional Purposes (Prioritized)

- 1 Build awareness and appreciation of the Coast Guard
- 2 Provide an excellent visitor experience that tells the story
- 3 Build engagement
- 4 Provide public education, particularly STEM
- 5 Promote interest in joining the Coast Guard
- 6 Strengthen Coast Guard family ties
- 7 Build public support for Coast Guard programs
- 8 Support the Coast Guard Academy
- 9 Build public relationships and partnerships
- 10 Benefit New London and the region economically

Guiding Principles (also known as, Values)

Given the strong priority to values in the Coast Guard, combined with the aspiration to have the Museum become an accredited museum, the National Coast Guard Museum will aspire to these guiding principles:

- The Museum is popular and visitor focused
- The Museum is run on sound economics
- The Museum is a community collaborator
- The Museum is based on scholarship and collections
- The Museum is a public learning resource
- The Museum is an international institution
- The Museum is value driven
- The Museum is an institution built for change
- The Museum is itself a learning organization

Audience

The people who will directly benefit from the Museum's community services are *its audiences*. It is useful to divide audiences into two broad service markets: *visitors* and *program participants*.

Visitors are those who come for the visitor experience (see Chapter 7). Program participants are those who trust the Museum sufficiently to use its other programs and services.

Visitors

The National Coast Guard Museum's visitor experience will be geared primarily for tourists and secondarily for local residents, regional school children and teachers. The Museum Oversight Group also directed that the Museum be more adult in tone, while welcoming the family audience as well. The general public is the prime audience, with the Coast Guard-related audiences and school and other groups playing secondary roles. Serving the public takes precedence over serving the Coast Guard family, although their interests can still be met in many ways.

Key Visitor Segments: by Geography
National Coast Guard Museum

Segment	Primary Residents	Secondary Day-Trippers	Overnight Tourists
Adults without Children	✓	✓✓	✓✓✓
Adults with Children	✓✓	✓	✓✓
School & Youth Groups	✓✓	✓	
Young Adults	✓	✓	
Solo Visitors	✓*		✓
Teens	✓		✓

Table 3

Source: White Oak Associates, Inc.

- ✓✓✓ = Likely to be the prime segment
- ✓✓ = Likely to be a secondary segment
- ✓ = Likely to be a minor, but important share
- * = Academy Students

Program Participants

The principal categories of program participants that might be considered in the development of the National Coast Guard Museum's programs include:

- Maritime and Military organizations and their members
- Connecticut households
- Coast Guard affinity groups/clubs
- Corporate function rentals and retreats
- Academic conferences, particularly maritime-related
- Private events, particularly associated with reunions, graduation and other Coast Guard-related ceremonies

- School and youth groups (e.g., summer camps, camp-ins)
 - Evening young adult programs
 - Evening empty nester programs
 - Professionals/Hobbyists
 - Businesses
 - Granting Agencies
 - Community Groups
-

Supporters

The United States Coast Guard

The Coast Guard owns and operates the core functions of the Museum, and is therefore, its most significant supporter. The Museum's mission and purposes should primarily serve the Coast Guard and the public that funds it.

The National Coast Guard Museum Association

The National Coast Guard Museum Association (the "Association") is an independent 501(c)(3) non-profit with a mission to support the Museum. Currently, the Association is raising the funds to build the Museum, which it intends to gift to the Coast Guard. The Association is developing plans to operate the Museum's revenue-generating components like the Gift Shop after opening. The Association is also planning post-opening fundraising campaigns to pay for *margin of excellence programs* that the Coast Guard cannot afford to cover from their core operating budget. It is too speculative at this stage in their planning to count on net revenues or a steady supply of support funding, so the economic model is focused on core operations funded by the Coast Guard. Support from the Association will help make the Museum even better, but a lack of such funding will not endanger *core operations* as described and budgeted in this *Addendum '17*.

Volunteers

The Museum will be supported in non-monetary ways by individuals volunteering their time as docents, interns, and advisors.

Partners

The Museum will be supported in non-monetary ways by organizations volunteering their in-kind services, promotional activities and audiences.

The Coast Guard encourages partnerships, and the Museum Oversight Group put a high priority on the Museum forming partnerships in a number of areas to further its mission and to build the Coast Guard's connections. Because it is a public platform, the Museum offers opportunities for the Coast Guard to communicate and interact with (in priority): Other museums, public agencies, local businesses, environmental non-government organizations (NGOs), the educational system, the academic community and other research institutions, and other Coast Guard and military related organizations.

The Coast Guard and Museum Association Partnership

This *Plan* describes an integrated Museum, which is how its operations should appear to the outside world. Because of laws and regulations that preclude Coast Guard personnel from undertaking fundraising and other commercial activities, the actual operation will be a partnership between the Coast Guard, staffing areas appropriate to their charter, and the National Coast Guard Museum Association (the "Association"). The Association is a separate 501(c) 3 charitable organization supporting the Coast Guard's activities. The Association will raise the funds for the Museum, build it and turn it over to the Coast Guard for their ownership. The Association aspires to raise non-appropriated funds to support the operation and maintenance, but has no specific plans for post 2022 at this point. Hence, the model does not count on any operating contributions from them. The Coast Guard cannot formally accept the gift until it is complete and offered, yet the Coast Guard understands that the Association's journey should not be started without thinking about and developing realistic expectations for that gift's acceptance. The *Strategic Master Plan* and its *Addenda* present a quantified model that can be the basis of a mutual understanding.

Once operating, some of the Museum staff will be Coast Guard personnel, and some of the positions will be Association personnel. There are many museum precedents for this kind of arrangement, typically in university and government-owned museums, where an associated foundation handles the gift shops, feature theaters and function rentals, as well as running the annual campaign and periodic capital campaigns. When this document says "the Museum will do ...," please understand that the task may be carried out by the Coast Guard personnel, or the Association, or by citizen volunteers or some combination of these human resources.

Museum Components

The Museum is the sum of its components and the activities that happen within those spaces and programs. There is a direct alignment between the list of components and the "Architectural Program" in Chapter 20.

Drop-off Zone

Outdoor Park (by City)

Exterior Exhibits

Piers and Wharves [by City]

The Visitor Experience Zone (Free Access)

Entrance Lobby

Welcome Center

Visitor Amenities

Registration Kiosk

Coast Guard Gallery

The Gift Shop and Food Service

The Feature Theater (when showing the signature film)

Museum Galleries (3 Decks and 6 Wings)

Margin of Excellence Spaces (Scheduled Access)

STEM Learning Center

Early Learning Center

Event Center and Waterview Terrace

Digital Web Programs

Support Facilities (Offices, Workrooms, etc.)

On-site Support

Off-site Support (Walkable, leased downtown space)

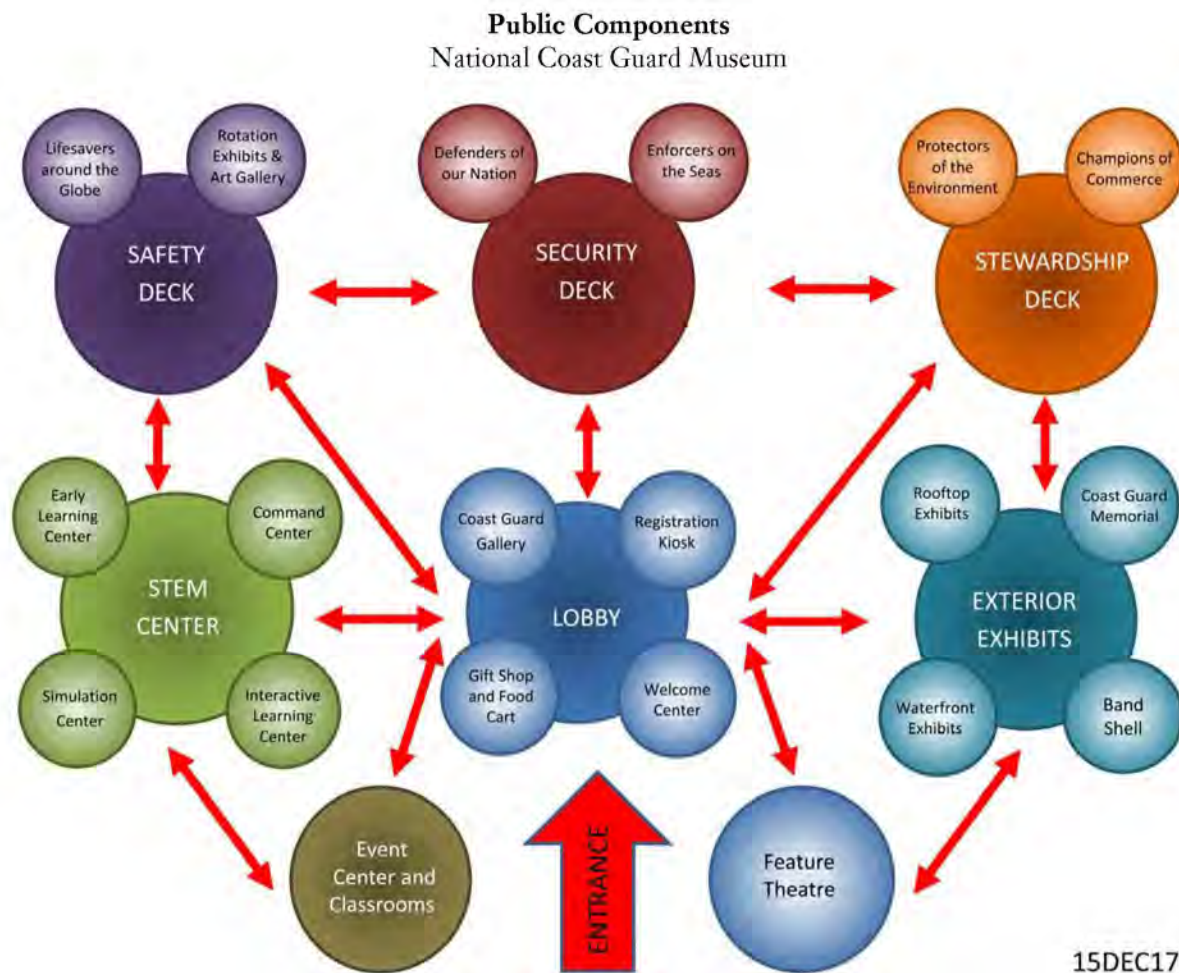


Table 4

Source: National Coast Guard Museum Association

The Visitor Experience Zone and the Margin of Excellence Spaces

The Visitor Experience Zone is a collection of public spaces that together comprise the core *visitor experience*. The zone includes the Entrance Lobby, the Feature Theater and the Museum Galleries, plus all their connecting spaces and visitor amenities. These spaces are open freely to the public during all opening hours.

In order to be successful, the concept and design of the *visitor experience* (also known as the exhibits and opening hours programming) will be contracted to one team of experienced visitor experience designers, under the direction, funding and supervision of the Coast Guard Historian's Office.

The Visitor Experience Zone is distinct from the Margin of Excellence and Support Zones, which have different access parameters.

Spaces designated to generate revenues in support of the Museum's extra efforts are in the Margin of Excellence spaces (also known as cost centers and after-hours programming). These components are not contiguous, but strategically located around the Museum where they are operationally effective and efficient.

These spaces include the Registration Kiosk, the Gift Shop and Food Service, the Event Center, and the STEM Learning Center with its Early Learning Center.

The Event Center and the STEM Learning Center will be jointly managed after opening, with responsibility shifting at agreed upon times. Before opening, the Association will be responsible for constructing the spaces and the Coast Guard or others for outfitting, equipping and furnishing these spaces.

The Margin of Excellence Spaces are physically distinct from the free Visitor Experience Zone, and access can be controlled during public hours. The Association can charge for extra value programs or for private use of these spaces within its time allotments.

Feature Theater

The emotional story of the Coast Guard is told using high-resolution media projection technologies, a dramatic wide screen and comfortable seats. On a wide, high-definition screen, 150 patrons will experience a dramatic portrayal of the dedication, service, power and honor of the Coast Guard.

The Feature Theater will be a separately accessed venue with this signature film. The signature film presentations will comprise the bulk of its programming, but it will also be possible to use the Feature Theater for other film uses and alternative presentations on a scheduled basis.

During regular public hours, the signature film in the Feature Theater is free. Off-schedule, it can be separately ticketed when it is operated by the Museum Association.

Museum Galleries

The narrative story of the Coast Guard will be told by the Museum Galleries, which include three "decks" with six "wings" including a rotating gallery.

Using an interpretive thematic approach, major exhibits will be organized by roles and missions within five major themes and a flexible gallery ("wings"): (1) Lifesavers around the Globe, (2) Champions of Commerce, (3) Protectors of the Environment, (4) Enforcers on the Seas, (5) Defenders of our Nation, and 6) Rotation Exhibits and Art Gallery. Clearly defined wings will be included in the architect's museum design, one for each of the six major areas. Within each of these major themes, the creative design team (working with advisory input from the MEAP) developed early concepts for potential galleries, stories, artifacts and experiences. These are described in much greater detail in the *Preliminary Master Interpretive Plan*.

Visitor Key Take-away Messages

- 1 From the founding of our Country, the US Coast Guard has played a critical role in the nation's defense, the growth of the United States as a maritime nation, and its significance as a global leader in commerce.
- 2 The Coast Guard is comprised of predecessor services that have shaped the culture and values instilled today.

- 3 Coast Guard men and women are on watch all over the world and the nation is safer and more secure as a result.
- 4 Coast Guard men and women are Lifesavers around the Globe, Champions of Commerce, Stewards of the Environment, Enforcers on the Seas, and Defenders of our Nation.
- 5 The Coast Guard is unique as compared to other services and agencies.
- 6 With its many missions, the US Coast Guard has been and continues to be interconnected with our daily lives.
- 7 Past, Present, and Future: The Coast Guard exemplifies their motto, *Semper Paratus*, by always being ready to respond to our Nation's needs.

Changing Exhibit Gallery

The Rotation Exhibits and Art Gallery is a 1,500 SF changeable gallery, perhaps more intimate and more contemplative than the other galleries. The Art Gallery features changing installations from the Coast Guard's substantial collection of paintings, sculptures, and other artwork. The changing exhibits are likely to be thematic, with diversity from show to show; a war action painting show, for instance might be followed by an installation of top-quality portraiture from the collection.

Registration Kiosk

The Association's Registration Kiosk for memberships, qualifications and donations contains an information and sales counter. It is located downstream in the entering visitor traffic flow from the Welcome Center, but before the elevators and stairs.

This service desk distributes Qualification Chip Cards that enable visitors to activate game-like sequences in designated exhibits in the galleries and to accumulate points. Enough points earn a qualification certificate and a time slot on one of the simulators in the STEM Learning Center.

The service desk also sells memberships with benefits to residents for evening and winter programs and to young families, with members-only access to the Early Learning Center.

The Museum Shop and Food Service

The Museum Shop and Food Service, two separate facilities in earlier plans, have been combined because the waterfront café envisioned in 2014 is not code compliant, and the Museum's traffic alone is not large enough to sustain a café.

Food service will be handled by the Museum Shop operator and will be limited to the equivalent of a food cart. There is also a vending machine nook near school lunch areas. There are other food service options in nearby downtown.

STEM Learning Center

By including a STEM-focused approach to the overall visitor experience, the National Coast Guard Museum will leverage K-12 programming, expert speakers, virtual shipmates, operational platforms, engaging museum exhibits, modern exploration laboratories, and interactive experiences and simulations to support three primary goals with STEM:

- Create an enjoyable and stimulating learning environment that promotes social interaction and heightens student interest, curiosity, and confidence in continued STEM learning.

- Develop a continuum of learning experiences that increase in complexity and provide opportunities for students to improve knowledge and understanding of concepts.
- Inspire increased understanding and interest in careers, to include potential careers in the maritime, aeronautics, and in the United States Coast Guard.

Throughout the entire STEM Learning Center, key experiences will be enhanced with hands-on Coast Guard opportunities to include communications, optics and lighting, engineering, seamanship, damage control, marine science (fisheries), marine science (environmental), and navigation. An example is an interactive marine science (fisheries) experience which not only explains the need for regulations, but permits the visitors to determine proper catch by using Coast Guard procedures and equipment.

The Learning Center will be accessible from the public entrances as well as connected to the Museum Galleries. This allows school groups and others to arrive at the Museum, enter through the Learning Center, receive broad orientation in the Command, an open area, proceed through the exhibit experience, and possibly return to the Learning Center's program spaces for more in-depth programs in the labs before re-assembling for departure.

The STEM Learning Center will include spaces such as: The Command (a group activity space); a STEM Classroom, Exploration Labs and Interactive Simulator Pods.

Early Learning Center

The Early Learning Center will engage children in STEM learning at an early age. All exhibits will stimulate constructivist learning through multiple learning styles. Exhibits with Coast Guard themes and characters will provide a suite of learning opportunities by providing experiences that will encourage full-bodied play (sometimes encouraging a feeling of "safe danger"), provide hands-on experiences for direct learning, foster role play, create emotional connections, provide context for content, encourage social, family-based learning, provide real objects and themed environments, and mix changeable elements with the familiar and safe.

A toddlers' area is tucked away in a quiet, safe nook. Entrance is permitted only to those under a certain height and with their caregiver. Here, the youngest visitors can play safely in a soft environment.

Event Center

The Event Center will occupy the top floor of the Museum, with an outdoor terrace with a glorious view. The indoor space (including additional catering and other support facilities) is capable of hosting dinner events, weddings, conferences, school groups and even traveling exhibitions. During group visits, these spaces can serve as the group orientation and lunch.

Digital and Virtual Museum Engagements

The Museum's virtual and outreach engagements will be defined in a forward-looking plan for the Museum's online activities and digital programs and assets. It is too early to speculate about specifics, but the objectives might include: building the national and international bonds among the Coast Guard family; supporting and furthering the Qualification Program and other after-visit support; teacher professional tools; online Gift Shop sales; membership services; collections access, Academy curriculum assignments; program reservations and scheduling, etc. The Startup Budget supports this future plan with placeholder investments in equipment, infrastructure, space and personnel.

The *Eagle* and other Coast Guard Vessels

The City controls most of the outdoor space used for dock-based activities like the USCGC *Eagle*, water-taxis, rowboats, pleasure craft, riverboat cruises, waterfront festivals, dinner cruises, lighthouse tours and civic gatherings.

The Coast Guard Cutter *Eagle* and other vessels when in port will provide prominent icons for the Museum. When in port, these vessels will attempt to open to the public on a regular tour schedule as defined by the Coast Guard.

Collections

When asked ‘why use a museum to tell the story of the Coast Guard?’ Dr. Robert M. Browning (Ph.D.), the Coast Guard’s Historian in 2008, emphasized the “use of historical artifacts to tell the story” and the “power of objects to communicate,” and so the collections will play a central role in helping the Museum achieve its objectives. Real objects, particularly those that show the mark of use and of history like the Katrina Axe, can connect us emotionally to the past and provide an authentic link to important stories.

There are close to 20,000 objects in the Coast Guard’s extended collections, and many more stories can be found in the uniforms, weapons, equipment and other historical objects located in two collection storage areas (New London and Forestville) and dispersed on loan to over 250 museums internationally and many Coast Guard facilities. Additionally, there is an extensive collection of Coast Guard art.

The Museum is a startup, with both staff maturity and architectural stability expected only several years after opening. It is premature to entrust the management of the Coast Guard’s collections to the Museum (except for loaned objects) until it is both professionally and spatially ready to take on stewardship of some or all of the collection at some nearby but offsite location, aside from those collection objects installed in exhibits and public displays. This means that the current separate management and funding for the Coast Guard’s collections should continue until sometime after the Museum has opened. The Coast Guard, not the Association, is responsible for the stewardship, conservation and interpretation of its collection (the Heritage Asset Collection).

Museum Programming

“Programming” is what the Museum does day-to-day with the building and its exhibits; in the long run, programming is what draws repeat visitors and motivates membership, and sometimes grant funding, to support after-school workshops, for instance.

On-site attendance includes both visitors and program participants counted by person-trips to the Museum’s site. The motivation to make the trip is the distinction between visitors and program participants—did they come primarily for a visit or a program?

Any museum engagement that is not a visit is program participation. By this definition, board meetings, volunteer shifts, meetings with grant officers and event rentals are programs and the individuals attending them are program participants.

Given the tight limits on space, an emphasis on designing and outfitting spaces for multiple functions makes sense for certain spaces, and the planners suggest that the following spaces in the Architectural Program (see Chapter 20) be positioned and equipped as *multi-purpose spaces*,

with the net effect of increasing the Museum's ability to offer programs for residents, particularly off-season: The Lobby, the Feature Theater; the Event Center; the Changing Gallery; the STEM Learning Center; and the Early Learning Center.

Organization of Programming

The STEM Learning Center is the Museum's education department as well as a series of spaces and an array of Margin of Excellence Programs that enrich the Museum and its visitor experience.

The overall vision driving the Learning Center programs revolves around serving two primary audiences—the K-12 audience and the public audience. Each of these audience groups will require specific and targeted program delivery strategies and approaches that, while complementary, are often quite distinct from one another. The Museum will pay particular attention to serving the K-12 audience for free. In time, the Association's staff may offer fee-based programs to the public, but these are not in the economic model.

Individual Programs

People can make the Coast Guard real in a way that exhibits, brochures and books cannot. The Museum can play a role along with other partners in connecting the professional and amateur-Coast Guard community with learners, including students, teachers and families. By establishing a number of people-to-people programs and providing a variety of learning strategies, The Museum will encourage customers and visitors to become active, engaged learners. At the Museum, mentoring and social interactions will be encouraged through active duty guardsmen, volunteer, docent, and advisory programs.

Group programs

A school group visiting the Museum will be offered a brief orientation, time to explore the exhibits, a time slot to use the lunch area, and materials to fully integrate the experience into the classroom (the core group program). For an extra fee, school groups can register for special programs and materials.

To familiarize themselves with the facility and integrate the programs and exhibits into their curriculum, teachers will be encouraged to visit the Museum in advance of their field trips. Prior to a field trip, "tips for Field Trips" and pre- and post-lessons and activities will be available to the teacher. In addition, teachers can printout on-line self-guided tours and exhibit explanations to use with their students and chaperones. With an advance reservation, The Museum will try to arrange for a volunteer explainer who can facilitate the school groups' experience.

Margin of Excellence Programs (Future Option)

Margin of Excellence Programs is responsible for developing and delivering educational programs that are grant- or fee-based, cover their own costs, and in certain cases, help the Museum. Arriving at the right mix of programs that serve a wide range of out-of-school audiences and use the time slots unfilled by schools will take time and flexibility. *Margin of Excellence Programs* will be developed by the NCGM Association after opening for specific audience groups that are important to the mission of the Museum, including youth and families, home schoolers, youth groups, downtown residents and employees, community groups, professional audiences, adults, and a variety of government or private sector audiences.

Qualification Programs: Young visitors (tweens and teens) can collect points at designated units in the Museum Galleries. They can select among different qualifications paths: Aviator, navigator, etc.

Virtual Shipmates: Visitors can select their personal gallery guide, like an audio tour, from an evolving menu of historical characters, drawn from the Coast Guard's rich collection of colorful and heroic stories.

Youth and Family Programs: will develop and offer a range of enrichment classes, workshops, and week-long camps for pre-school children, youth, and families covering a broad array of topics related to the Coast Guard and maritime activities. In addition, programs will be offered during school holiday periods when parents need structured experiences for their children. The burgeoning home school market will also provide opportunities to redeploy the existing repertoire of youth classes and activities.

Themed birthday parties will be offered to youth and will include time for the party group to explore the exhibits, a choice of an age appropriate hands-on workshop, and a short use of a learning center space as a birthday party room. These group parties have proven very popular and profitable.

Adult and Travel Programs will offer related lectures, classes, and domestic and international study tours, as well as day-long field trips for the adult community and the Museum's membership. In cultivating the adult audience, the Museum will actively promote partnerships with colleges, continuing education centers, and professional societies. The Museum might also collaborate with elder hostel programs or conference organizers to offer tours for spouses of conference participants.

Camp-Ins and Group Programs: Camp-Ins will be an intensive, fun, hands-on, overnight experience for youth groups. Campers will have the exclusive use of the Museum so they can explore the facility to their heart's content. They also have the opportunity to participate in specially designed hands-on workshops. Overnight camp-in programs have become very popular in museums nationwide. They provide a tremendous opportunity to increase the visitation and engage the young visitor. Girl Scout camp-in programs have been very successful educationally and financially lucrative for many museums.

Special Events and Programs Using the Whole Museum: Special Events can tie in with annual celebrations or be stand alone, one-time initiatives; used for general publicity, fundraising, soliciting community support and coordinating with regional festivities. Holiday and special weekends will be designed to include parades, "waterfront conventions" or to coincide with exhibit openings. These events will be excellent opportunities to collaborate with discipline-based societies, and regional professional associations.

Community Programming

In time, the National Coast Guard Museum Association may offer a variety of Courses and Programs, but these are not in this economic model:

Youth Programs

Kids Sleepover Program
 School Program Enhancements
 Qualifications Program

Adult Programs

Lecture Series
 Film Series
 Community Events

Event Rentals

Meetings
 Receptions
 Reunions
 Weddings

Spring and Summer Camps

Maritime Adventures Camp
 Day Express Camp

Market and Attendance Potential Analysis

The market population from which the Museum will attract visitors and program participants is divided into four groups: Residents, School Children, Overnight Tourists, and passengers on the ferries departing and arriving from New London.

The resident market has been further subdivided into two segments: the resident population within a 45-minute drive of New London and the resident population within a 70-minute drive. The population from the four market segments is extremely large, over ten million. Within a 45-minute drive of New London the 2017 population is just under 550,000 and within a 45 to 70-minute drive there are an additional 2.37 million people.

The largest of the four market segments is overnight tourists to Southeastern Connecticut, estimated at 5.9 million. Southeastern CT is popular with residents and tourists because of its many well-known attractions, including Mystic Seaport and Mystic Aquarium, and the two large casinos in the area. Currently there are about 1.5 million ferry terminal passengers per annum.

The school market, the smallest, includes four counties in CT and one in Rhode Island.

All markets, except for the school market, are expected to grow in population through 2025, the current projected stable year of operations, the fourth year after opening in 2022.

One national market available to the Museum is the 138,000 persons associated with the Coast Guard including: active personnel; retired personnel (that the Coast Guard is aware of), civilian personnel and the Coast Guard Auxiliary. Not included in that number are the many thousands of former Coast Guard personnel that did not make the Coast Guard a career. Other persons and groups that will be interested in the Museum include lighthouse and Fresnel aficionados, boaters and those interested in maritime-related topics, as well as many others.

Total Estimated 2017 and Projected 2025 Population by Market Segment
National Coast Guard Museum

	Population 2017	Projected 2025
Primary Market: Population with 45-min drive	548,163	600,533
Secondary Market: Add'l Population w/in 70-min drive	2,372,142	2,421,183
PK-12 School Children	243,528	232,000
Subtotal Resident Market	3,163,833	3,253,716
Overnight Tourists Southeastern CT	5,900,000	5,989,000
Ferry Terminal Passengers	1,500,000	1,750,000
Total/Cumulative	10,563,833	10,992,716

Table 5

Source: White Oak Associates, Inc.

The attendance potential estimate for the Museum is based on applying several methodologies, which converge on a figure; the methods include an analysis of the following:

- Size and quality of the proposed Museum
- Current and projected demographics of the resident population base
- Size of the school population
- The number and profile of overnight tourists and ferry passengers
- The health of the local economy, overall trends and development projects in the pipeline
- Estimated capture rates by market segment based on museum industry data
- Attendance and market capture ratios for a selection of other military museums and science centers in the US
- Attendance at local and regional attractions

Table 6 presents the attendance potential by market segment. The largest segment of attendance is expected to come from ferry passengers. One of the terminals yet to be built will be adjacent to the Museum and will share a pedestrian bridge that will extend from the closest garage to the Museum and the ferry terminal. The Museum will be free, always a boost to attendance, and will be an attractive draw to those passing by.

Assuming the Museum follows industry trends for new museums, attendance in the opening years is expected to be higher than in 2025, stable year four.

The middle scenario attendance potential for 2025 is 344,000 persons. The planners further discounted the middle scenario by 15% (to 292,000) to account for Murphy's Law - unexpected occurrences. The attendance potential is derived by applying capture ratios to the market segments and the Museum is bound to run across unexpected issues and new competition in the years to come. This discount will allow the Museum to look good if it exceeds attendance and the Association to see larger surpluses – both better than attendance shortfalls and revenue deficits.

It is recommended that 292,000 be used as the stable year attendance number to be shared with the public and in publications. It is better to be conservative. Not achieving attendance potential is demoralizing to the staff and the community. It is far better to exceed the attendance potential

number. Regarding first and second year attendance, which should be higher, one can say that the attendance in the first two years should be higher if the Museum follows trends experienced at other new museums.

Stable Year Four (2025) Middle Scenario Attendance Potential

National Coast Guard Museum

Stable Year 4 Market Segment	Share of	
	Att'd	Total
Primary Market: Population with 45-min drive	66,000	19%
Secondary Market: Add'l Population w/in 70-min drive	36,000	11%
PK-12 School Children in 5-County Market	9,000	3%
Overnight Tourists to Southeastern CT	75,000	22%
Ferry Terminal Passengers	158,000	46%
Total/Cumulative	344,000	100.0%
Nominal Attendance Range	344,000	
Budget Number for Operating Pro Forma	292,000	
Total Resident	32%	
Total Tourist	68%	

Table 6

Source: White Oak Associates, Inc.

Capacity and Architecture

Capacity, Parking and Design Day Calculations

National Coast Guard Museum

Assumptions

Typical Year Attendance	292,000	Site Visits Per Year
Extraordinary Loading Factor	20%	In addition to Typical Year
Max Building Demand Will Be:	350,400	Facility Visits per Year
Highest Month Capture Ratio:	14%	Peak Month Share of the Yearly Total
Highest Day-of-Week Capture Ratio:	23%	Peak Day's Share of a Summer Week
Number of Weeks in a Month	4.33	Fifty-two Weeks Divided by 12 Months
Average Dwell Time:	1.50	Hours for the Average Visit
Peak Dwell Time Capture Ratio:	40%	Of Design Day During Heaviest Hours
Visitors Arriving by Car:	80%	During Summer Weekends
Visitors per Car:	2.7	During Summer Weekends
Volunteer (6) & Staff Size (27,25)	33.25	On-site at One Time During Weekends
Staff per Car	1.1	Accounts for Car Pools, Bikes, Walking, Etc.

Calculations

Design Day Capacity:	2,606	Visitors on a typical August weekend day
Peak Momentary Capacity:	1,042	Design Capacity (Code Capacity should be higher)
Hourly Peak Flow:	695	Visitors/hour processing speed
Peak Flow:	12	Visitors/minute processing speed
Peak Car Parking:	309	Cars (weekends, principally)
Staff & Volunteer Parking:	30	
Total Parking	339	

Table 7

Source: Connecticut's Vision Index (Autumn 2016); Visitor Seasonality (2014-2016); White Oak Associates, Inc.

The Architectural Program in Chapter 20 is a recommended strategic allocation of the total available space (68,325 GSF) in Payette's 2017 scheme. The priority is to maximize the space assigned to the visitor experience, while providing just enough on-site space needed to effectively service and support the Museum's operation including all staff. Other storage and support functions are located off site, in order to keep as much space as possible in the compact building for the public.

Summary Architectural Program
National Coast Guard Museum

	2017 White Oak Program	White Oak Program % of Net
Entry, Lobby, Free Zone Amenities	2,910	5.8%
Museum Store & Café	2,350	4.6%
Galleries	26,925	53.3%
Feature Theater	3,200	6.3%
Simulation Center	0	0.0%
Lecture Space	0	0.0%
STEM Learning Center	4,600	9.1%
Event Space w/Catering Kitchen	4,355	8.6%
Collections Center	400	0.8%
Administrative	3,415	6.8%
Facility Support Areas (Net)	2,395	4.7%
Total Net Museum Floor Area	50,550	100.0%
Gross-up Areas (GSF)	17,775	
Total Museum Floor Area	68,325	
Eagle Storage (NIC)	0	
Total Building Floor Area	68,325	

Table 8

Source: Payette Architects; White Oak Associates, Inc.

The revised Outline Architectural Program v 6.3 (shown in Table 20.3) is the most comprehensive statement of the recommended spaces in the physical master plan for the new facility and should be referenced as the definitive guide as the architectural design process continues.

Public Relations

One of the Museum's main roles is symbolic: The Museum is the public face of the US Coast Guard and where it tells its story. The Museum is a public forum for the Coast Guard's

messages and the first door to involvement with the Coast Guard. The Museum is the Coast Guard's public platform.

General Objectives for Public Relations

The primary objectives of the *Public Relations Plan* for the new National Coast Guard Museum are:

- 1 To serve the Museum's mission and objectives, with a focus on serving the Coast Guard as one of its most effective portals to the public.
- 2 To build broad public awareness of the Coast Guard
- 3 To inspire positive attitudes toward the Museum among the residents of the region by communicating its mission, products and services.
- 4 To attract visitors and program participants in numbers detailed elsewhere in the *Plan*.
- 5 To establish the Museum as a successful museum and attraction in southeast Connecticut.
- 6 To analyze the audience and forecast their attendance and interests and to use that information and other market research to be a "learning organization," constantly improving its relationship with its customers.
- 7 To help the Association achieve their operational earned revenue goals while honoring the policies for government employees about fundraising.
- 8 To define the goals, strategies, budgeting and implementation of each of the integrated communications campaigns (media, publicity, promotions, etc.).
- 9 To support the Association's fundraising and development efforts and to acknowledge their donors and promote their participation in an appropriate manner.
- 10 To support community relations efforts and to acknowledge promotional and in-kind partners and promote their participation in an appropriate manner.

Key Messages: 2022 Description

The communications responsibilities of the Museum's public materials and image include the following messages (a master list; different messages should be selected for different audiences):

- 1 National Coast Guard Museum showcases the Coast Guard's stories through engaging visitor's experiences interpreting its historic collections and current activities and equipment.
- 1 The Museum is a world-class attraction filled with experiences that are meaningful for a wide range of audiences - from families to schoolchildren to senior citizens.
- 2 The Museum is a fun, entertaining place to visit.
- 3 The Museum is a multi-cultural educational facility committed to serving peoples from all backgrounds.
- 4 The Feature Theater is a prominent feature of the new facility.
- 5 The Museum has classrooms for group programs and more formal learning programs.
- 6 The Museum operates an active function rental business.

- 7 There will be changing traveling art exhibitions and special events which complement the exhibit experience and give the Museum a dynamic image.
- 8 The Museum is a premiere attraction in the New London area, and one of the popular attractions in southeast Connecticut.
- 9 The new Museum and pedestrian overpass bring more vitality downtown.
- 10 The Museum serves both as a local resource for cultural fulfillment and as a destination attraction, which helps feed the New London economy.

Operating Staff and Budgets

Summary and departmental operating budgets were developed for the first five years of operations for the Museum. The Association, or a similar entity, which will manage earned and support revenue aspects of the Museum, will be a separate entity with separate budgets and staffing. In order to deliver a first class visitor experience, the two organizations will need to have a high degree of communication and collaboration.

The Coast Guard will be responsible for the Museum's general administration and finance, facility maintenance and upkeep, exhibit maintenance and annual change, free programs, collections maintenance and preservation, Internet access and information systems, community relations and all aspects of visitor services such as gallery staffing and managing volunteers that are not related to earned revenue. The use of volunteers will follow government guidelines.

The Museum's staffing totals 32.40 full-time equivalent (FTE) personnel annually. Four of the positions are enlisted personnel and 28.40 Coast Guard civilian GS workers. The Museum will also employ or contract seasonal personnel to assist as gallery interpreters and greeters during the peak summer months. The Association's staff, budget and contractors are in addition to this.

Coast Guard Museum Staff List
National Coast Guard Museum

	Rank/ Grade	Status	FTE's	Funding Source
ADMINISTRATION				
Museum Director	GS 15	FT perm	1.0	Civilian
Executive Assistant	GS 6	FT perm	1.0	Civilian
Deputy Director	GS 14	FT perm	1.0	Civilian
Assistant to the Deputy Director	GS 6	FT perm	1.0	Civilian
SR Accountant Liaison to USCG Hdqtrs (Acct, HR, Payroll)	GS 9	FT perm	1.0	Civilian
Procurement Liaison	GS 7	FT perm	1.0	Civilian
Acct. Clerk / Bookkeeper III	GS 5	PT perm	0.5	Civilian
Community Liaison and Public Relations	GS 12	FT Perm	1.0	Civilian
Community Liaison Assistant	GS 6	PT perm	0.5	Civilian
Web and Social Media	GS 7	FT perm	1.0	Civilian
Director of NCGM Facilities/Security	GS 13	FT perm	1.0	Civilian
Facility Maintenance Engineer/Supervisor	GS 9	FT perm	1.0	Civilian
Facilities Technician - Engineer (Thtr, Exhibits, Facility)	GS 7	FT perm	1.0	Civilian
Information Technology Manager	GS 12	FT perm	1.0	Civilian
Security Staff CONTRACT Labor				Contract
Custodians/Groundskeepers CONTRACT Labor				Contract
SUBTOTAL - ADMINISTRATION			13.00	
EXHIBITS AND PROGRAMS				
Director Exhibits & Programs	GS 13	FT perm	1.0	Civilian
Administrative Assistant	GS 5	FT perm	1.0	Civilian
Curator of Exhibits & Heritage Asset Collections	GS 12	FT perm	1.0	Civilian
Museum/Collections Technician	GS 9	FT perm	1.0	Civilian
Exhibit Maint/Changeover Tech.	GS 7	FT perm	1.0	Civilian
Education Specialist: Programs	GS 9	FT perm	1.0	Civilian
Education Asst: Programs	GS 6	FT perm	1.0	Civilian
Visitor Services and Events Manager	GS 9	FT perm	1.0	Civilian
Visitor Services Assistant	GS 7	FT perm	1.0	Civilian
Volunteer Manager (docent Training)	GS 7	FT perm	1.0	Civilian
Volunteer Docents		Volunteers		Civilian
Gallery Interpreters/Greeters/Floor Staff	GS 3	PT perm	5.4	Civilian
Gallery Interpreters/Greeters/Floor Summer CONTRACT				Contract
Military Personnel:				
Military 1 Command Silver Badge	E-9	FT perm	1.0	Military
Military 2 Storekeeper	E-5	FT perm	1.0	Military
Military 3 Public Affairs Officer	E-5	FT perm	1.0	Military
Military 4 Yeoman	E-5	FT perm	1.0	Military
SUBTOTAL EXHIBITS & PROGRAMS			19.40	
Other: Admin. flexible office, shipping/receiving, STEM Ctr.				
TOTAL USCG - CIVILIAN & MILITARY			32.40	
TOTAL SALARIES WITH BENEFITS			\$3,079,535	

Table 9

Source: United States Coast Guard and White Oak Associates, Inc.

Table 10 and Table 11 present the five-year operating budget for the Museum in 2017 dollars and inflation-adjusted 2025 dollars. Opening year is anticipated to be 2022, with a stable operating year in 2025, four years after opening. A stable year is one in which attendance trends are related more to programming choices and marketing than the excitement surrounding a new

facility in the first years after it opens. The budget is based on full years starting in May of 2022, not calendar or fiscal years.

The Museum Association will provide Margin of Excellence programming, adding to the quality of the visitor experience.

Coast Guard NCGM Summary Operating Budget (2017\$)

National Coast Guard Museum

NCGM Budget 2017\$	Future Yr 1	Year 1 2022	Year 2 2023	Year 3 2024	Stable Yr 4 2025	Year 5 2026	Yr 4
<i>On-Site Attendance</i>		321,200	335,800	277,400	292,000	297,840	
EXPENSES							
Salaries and Benefits	52%	\$3,079,535	\$3,079,535	\$3,079,535	\$3,079,535	\$3,079,535	50%
Visitor Services & Programs	5%						7%
Exhibits and Programs	3%	\$163,900	\$263,866	\$313,866	\$328,866	\$323,866	5%
Feature Theater	0%	\$24,600	\$35,600	\$35,600	\$35,600	\$35,600	1%
Visitor Services	2%	\$93,400	\$84,273	\$79,273	\$89,823	\$86,273	1%
Overhead & Support	43%						43%
Admin & Finance	1%	\$47,850	\$50,300	\$50,300	\$50,300	\$50,300	1%
Information Services	2%	\$145,000	\$172,550	\$172,550	\$190,550	\$172,550	3%
Director's Office	1%	\$55,200	\$54,800	\$54,800	\$54,800	\$54,800	1%
Deputy Director's Office	1%	\$34,200	\$32,800	\$32,800	\$32,800	\$32,800	1%
Community Relations	4%	\$218,150	\$174,500	\$174,500	\$189,250	\$189,250	3%
Off-site Storage	2%	\$129,778	\$128,578	\$127,378	\$126,178	\$124,978	2%
Facilities	32%	\$1,917,449	\$1,988,733	\$1,988,733	\$1,998,733	\$1,988,733	32%
TOTAL OPERATING EXPENSES	100%	\$5,909,062	\$6,065,535	\$6,109,335	\$6,176,435	\$6,138,685	100%

Table 10

Source: White Oak Associates, Inc.

Coast Guard NCGM Summary Operating Budget

Inflation-Adjusted Dollars

National Coast Guard Museum

Inflation Rate - Personnel		1.10	1.12	1.14	1.16	1.18	
Inflation Rate - Facility Costs		1.28	1.34	1.41	1.48	1.55	
Inflation Rate Other Costs	Yr	1.13	1.16	1.19	1.22	1.25	Yr
	1	2022	2023	2024	2025	2026	4
Inflation Adjusted NCGM Budget		Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	
<i>On-Site Attendance</i>		321,200	335,800	277,400	292,000	297,840	
EXPENSES							
Salaries and Benefits	49%	\$3,383,421	\$3,447,706	\$3,513,213	\$3,579,964	\$3,647,983	45%
Visitor Services & Programs	5%						7%
Exhibits and Programs	3%	\$185,438	\$306,004	\$373,088	\$400,692	\$404,465	5%
Feature Theater	0%	\$27,833	\$41,285	\$42,317	\$43,375	\$44,460	1%
Visitor Services	2%	\$105,674	\$97,731	\$94,231	\$109,441	\$107,743	1%
Overhead & Support	46%						47%
Admin, HR & Finance	1%	\$54,138	\$58,333	\$59,791	\$61,286	\$62,818	1%
Information Services	2%	\$164,054	\$200,105	\$205,108	\$232,167	\$215,491	3%
Director's Office	1%	\$62,454	\$63,551	\$65,140	\$66,768	\$68,438	1%
Deputy Director's Office	1%	\$38,694	\$38,038	\$38,989	\$39,964	\$40,963	1%
Community Relations	4%	\$246,817	\$202,367	\$207,426	\$230,583	\$236,347	3%
Off-site Storage	2%	\$146,832	\$149,111	\$151,412	\$153,736	\$156,080	2%
Facilities	36%	\$2,447,205	\$2,665,092	\$2,798,347	\$2,953,039	\$3,085,177	38%
TOTAL OPERATING EXPENSES	100%	\$6,862,559	\$7,269,323	\$7,549,061	\$7,871,012	\$8,069,965	100%

Table 11

Source: White Oak Associates, Inc.

Capital Phase Implementation

The proposed schedule expects the facility to be opened to the public on May 28, 2022 (2Q '22). The *phase schedule* developed in the next tables provides a current time framework for the Museum's implementation. While many teams will be working at the same time, the phase's name reflects the activity that is on the critical path at that time. Responsibility for the critical path will shift among the teams critical to launching a successful institution, but all teams are active in all phases.

Critical Path Phases and Key Decision Points (KDPs) -- Preconstruction National Coast Guard Museum

#	PHASE	ON CRITICAL PATH	LENGTH	DATE Complete
1	Preliminary Research & Planning	NCGM Association	Complete	
2	<i>Strategic Master Plan</i>	Museum Planner	Complete	
3	Site Selection and Concept Design	Site Planning Team	Complete	
4	<i>Addendum '14 to the Master Plan</i>	Museum Planner	Complete	
5	Permit 1: MOA Agreements	Museum Assoc./USCG/City	Complete	
6	Site Development Plan	Architect	Complete	
	Lead Funding & Organization	Investment Team	Complete.	
	Campaign Research & Plan	Investment Team	Complete.	
KDP 1	Federal Funding Appropriation	USCG	Complete	05/30/17
KDP 2	Funding Goal 1: SD	Investment Team	Complete	10/13/17
	FY 20 CG Resource Allocation	USCG	Milestone	04/30/18
7	Schematic Design	Architect	Complete	05/15/18
	<i>Addendum '17</i>	Museum Planner	Complete	05/15/18
KDP 3	Review Schematic Design	USCG	Milestone	05/30/18
KDP 4	Funding Goal 2: DD	Investment Team	Milestone	05/30/18
8	Design Development	Architect/Exhibit Designer	5 Months	10/30/18
KDP 5	NoP 1: Visitor Experience Design	Program Team	Milestone	05/30/18
	FY 20 RP submission to OMB	USCG	Milestone	08/30/18
	Visitor Experience: SD	Program Team	(5 months)	10/30/18
KDP 6	Funding Goal 3: CD	Investment Team	Milestone	10/30/18
	FY21 Museum RP due to RMO	USCG	Milestone	11/30/18
KDP 7	Review Design Development	USCG	Milestone	11/30/18
KDP 8	Permit 2: Complete NEPA study	Building Team	Milestone	12/31/18
	Visitor Experience: DD	Program Team	(5 months)	03/30/19
9	Construction Documents	Architect	4 Months	03/30/19
	Visitor Experience: CD	Program Team	(7 months)	10/30/19
KDP 9	Review Construction Documents	USCG	Milestone	04/30/19

Table 12a (1 of 2)

Source: National Coast Guard Museum Association, Payette, United States Coast Guard and White Oak Associates

Critical Path Phases and Key Decision Points (KDPs) -- Construction to Opening
National Coast Guard Museum

#	PHASE	ON CRITICAL PATH	LENGTH	DATE Complete
KDP 10	Funding Goal 4: Site Preparation	Investment Team	Milestone	04/30/19
10	Construction Bids & Awards	Building Team	3 Months	06/30/19
KDP 11	Permit 3: Site	Building Team	Milestone	06/30/19
KDP 12	Funding Goal 5: Construction	Investment Team/USCG	Milestone	06/30/19
11	Groundbreaking	Contractor	Milestone	06/30/19
	Site and Bulkhead	Contractor	2 Months	08/30/19
KDP 13	Permit 4: Construction	Building Team	Milestone	08/30/19
12	Building Construction	Contractor	28 Months	12/31/21
KDP 14	Funding Goal 6: Program	Investment Team	Milestone	09/30/19
KDP 15	NoP 2: VE Fabrication	Program Team	Milestone	09/30/19
KDP 16	NoP 3: Film & Theater	Program Team	Milestone	10/30/19
KDP 17	Funding Goal 7: Complete	Investment Team	Milestone	10/31/21
KDP 18	Building Ready for VE Installation	Contractor	Milestone	12/31/21
13	Installation of VE	Program Team	5 Months	05/28/22
	Shakedown	Operations Team	20 Days	04/29/22
	Previews	Investment Team	10 Days	05/18/22
KDP 19	Permit 5: Occupancy	Building Team	Milestone	05/28/22
KDP 20	Public Launch	Public Relations	Milestone	05/28/22
	Start Operations	Operations Team	On-going	
KDP 21	Gift of the Museum Accepted	USCG	Milestone	05/28/22
14	Summative Evaluation	Museum Planner	+ 4 Months	09/28/22
15	Typical Stable Year	Operations Team		2025

Table 12b (2 of 2)

Source: National Coast Guard Museum Association, Payette, United States Coast Guard and White Oak Associates

Capital and Pre-opening Operating Costs

The Capital and Pre-Opening Operating Budget (the “Startup Budget” as distinct from the “Operating Budget”) summarized in Tables 26.1 and detailed in Table 26.3 is a recommended *allocation of funds*, given the Museum’s conceptual framework and plans as described in this *Addendum 2017*. The responsibility for managing the spending of these funds will be delegated, first to either the Association or to the Coast Guard and then to their *task managers*, who may be contractors, such as building contractors and exhibit producers. Clarifying this division is an upcoming task; for now, the Startup Budget is integrated.

The Startup Budget assumes that its total equals the net amount generated by the capital campaign run by the Association and that any restrictions align with what is described in this document. In short, that the *sources of funds* align with the *allocation of funds* in Table 26.3. Raising this money and achieving this alignment is the Association’s business, and not the Coast Guard’s. The Coast Guard, however, needs to consider the risk that this alignment will not happen, and that risk is articulated in Chapter 28 “Risks and Mitigations.”

Not everyone will regard all items in the Startup Budget as "capital" expenses, in the strict definition of the term. Some categories include pre-opening operating expenses and on-going cash and unrestricted funds. However, the total budget attempts to identify all the Museum's expenses needed before opening day, when the Museum's operating budgets take over. If the Startup Budget is reduced, or the broad money allocations shifted significantly, operating results are also likely to be reduced.

It is important to recognize that the Startup Budget is a strategic allocation of funds, and not a specific estimate of expenses in each area. Nothing is designed yet, so nothing can be priced, and the overarching management task is to get everyone to design and fabricate within budget.

The Startup Budget is at an optimal level for success at a reasonable, but not excessive quality. It collects into one budget estimates from the Association and other sources.

All expenses incurred prior to opening have to fit into one or more of the existing line items. If new categories of expenses are created, then other existing line items must be reduced, as the total Startup Budget should not be increased without the Association's approval.

For historical comparisons to previous budgets, please see "Executive Summary" page xix.

Summary Startup Budget: 2017\$

National Coast Guard Museum

Building Contract	\$62,811,501
Building Associated	\$12,562,300
Overpass	\$20,000,000
Museum Equipment	\$2,057,500
Indoor Program Costs	\$23,972,156
Project Management	\$13,689,137
Museum Funds	\$1,721,690
TOTAL	\$ 136,814,285

Table 13

Source: National Coast Guard Museum Association, United States Coast Guard, Payette and White Oak Associates, Inc.

The planners strongly advise against borrowing money to complete the project with the hope that the loans can be repaid by future fund-raising or by excess revenues generated by earned income; museums that have tried this road have routinely suffered.

This budget is integrated and does not reflect a division between Coast Guard, the Association and potential other parties. Costs are for the net available to spend on a particular expense; any additional carrying, overhead or margin costs to the Association or the Coast Guard are not included.

Risks and Mitigations

The Association is now a full-time professional team with an office in New London. There is much less risk that the permitting will be denied, and greater chances that the fundraising goals can be met. The project has gained support, the downtown has improved, funds have been identified by both the Association and the Coast Guard, planning has proceeded by both parties,

and the architects are working on Schematic Design for a 2022 opening of a new 68,325 GSF Museum.

While all this is positive and a net decline in risk from 2008 and 2013, significant risks remain. Fundraising shortfalls, procedural delays and construction challenges are clear risks, and potential division of funding and responsibility issues may also threaten orderly progress. Written agreements, Key Decision Points (KDPs), holds and off-ramps are needed to mitigate such risks.

Conclusions

The purpose of *Addendum 2017* is to identify the US Coast Guard's funding commitment to the "Museum" described by this *Plan*. That amount is \$6,176,435 in 2017 dollars in the stabilized year and \$7,871,072 in inflation-adjusted 2025 dollars. If the annual appropriation is less, then expectations for the benefits should be revised, and at some point, the operation of the Museum and the safety of its entrusted collections will be in danger. This annual appropriation should be seen in the context of what other military branches are paying for their national museums and of the tangible and intangible benefits to the Coast Guard, Homeland Security and to the Nation as a whole (see below and next page).

Outcomes for the United States Coast Guard

Like the Coast Guard itself, the Museum is a multiple mission institution, always ready to serve the Coast Guard, by providing the following services and benefits:

- Public face of the Coast Guard
- Front door to involvement
- Platform to communicate globally
- Increased public awareness and appreciation of the Coast Guard
- Positive connections to the Coast Guard's stories and collections
- Pipeline for tomorrow's tech workforce; economic vitality
- Public partnerships
- Regional relationships
- Increased engagement with the Museum's programs
- Increased interest in Coast Guard involvement and possibly enlistment
- Closer bonds among the Coast Guard family and a stronger sense of self-identity and pride.
- Higher quality of life
- More public support for Coast Guard initiatives
- Prestigious, well-equipped venues that honor the CG for events, presentations and programs
- A stronger hometown for the Academy and the Coast Guard
- 292,000 visits annually

Purposes, Impacts & Benefits
National Coast Guard Museum

Intentional Purpose	Desired Impact	Beneficiary	Perceived Benefit
Build awareness and appreciation of the United States Coast Guard	The public increases their awareness and appreciation of the Coast Guard	Coast Guard	Increased public awareness and appreciation of the Coast Guard
Provide the general public with a free, excellent and meaningful visitor experience that tells the Coast Guard story	The public is attracted by the quality and relevance of the visitor experience and programs based on the Coast Guard's stories and collections	The Public Coast Guard	Positive connections to the Coast Guard's stories and collections
Provide public education and other services, particularly STEM education	Students develop positive attitudes toward core competencies and STEM skills	Employers State of CT	Pipeline for tomorrow's tech workforce; economic vitality
Build engagement with the Museum	Individuals engage with the Museum's programs	Coast Guard	Increased engagement with the Museum's programs
Promote interest in joining the Coast Guard	Individuals increase their interest in the Coast Guard's programs	Coast Guard	Increased interest in involvement and possibly enlistment
Strengthen the ties among the Coast Guard family	Members of the greater Coast Guard family feel a stronger tie to their CG connection	Coast Guard The Coast Guard Family	Closer bonds among the Coast Guard family and a stronger sense of self-identity and pride.
Build public relationships and partnerships, particularly in New London	Regional organizations and residents engage often with the Museum	New London Residents, CT Coast Guard	Higher quality of life; more public support for Coast Guard initiatives
Support the Coast Guard Academy	The Academy uses the Museum for courses, assignments, commemorations, awards and honors	The Academy	Prestigious, well-equipped venues that honor the CG for events, presentations and programs
Economic benefits to New London and the region	The New London region is stronger economically, educationally and culturally	New London	A stronger hometown for the Academy and the Coast Guard

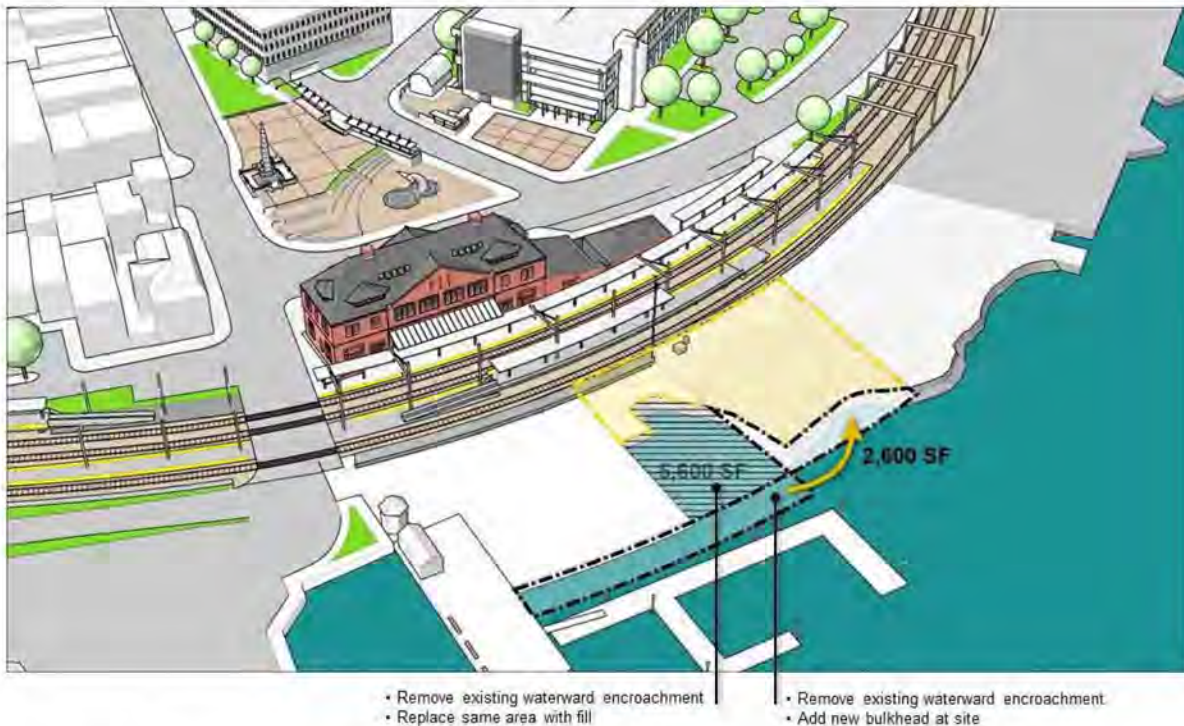
Table 14

Source: United States Coast Guard and White Oak Associates, Inc.

Executive Summary

National Coast Guard Museum

Addendum 2017



This Executive Summary focuses on what has changed since 2013. It summarizes this Addendum '17. Please see the previous "Summary Description" for the Museum as a whole.

In 2007/8, the United States Coast Guard ("the Coast Guard"), responding to a congressional mandate, undertook a national RFP competition for a strategic master plan, selecting museum planners White Oak Associates in a competitive bid to facilitate a planning process and document the results in the 2008 *Strategic Master Plan*. This comprehensive plan represented agreement by all parties at that time, and, after third party review, became the documentation for what the Coast Guard expects the New London-based National Coast Guard Museum ("the Museum") to be when it opens. In 2013, the Coast Guard commissioned *Addendum 2014* from White Oak. This document is *Addendum 2017*.

The National Coast Guard Museum Association (the "Association" and "NCGMA"), an independent non-profit, will still raise the funds for constructing the Museum, build it and turn it over to the Coast Guard for their ownership, but their role has shifted due to several factors: The Association has raised enough money to open and staff an office in New London; they have facilitated joint planning initiatives for the visitor experience and the education program; these concepts are promising starts, but are not yet developed into operating departments and sustainable business models. Until the Association's planning has developed, it is prudent to assume the Coast Guard will take care of the core operations of the Museum and that any net revenues and extra

efforts achieved by the Association after opening will add a *margin of excellence* to the Museum's core operations.

Context of this Addendum

The United States Coast Guard commissioned White Oak Associates, Inc., the Massachusetts-based, international museum planning firm that facilitated the 2008 *Plan* and *Addendum '14*, to prepare this *Addendum '17* to the *Strategic Master Plan* in order to 1) fulfill the Coast Guard's congressional mandate to submit funding plans in accordance with 14 USC 98; 2) inform the Coast Guard's decisions, and 3) document the Coast Guard's current expectations for the Museum that the Association intends to build and donate. This *Addendum '17* addresses only aspects that have changed enough to merit changes to the operating plan. A "Summary Description of the Museum" is included that touches on all aspects.

White Oak collected over 400 2014-2017 changes from interviews and documents into a database, and categorized them by what they might affect. Two selections are in Attachments A & B. Broadly, the planners feel the changes are very positive.

This document also summarizes the policy directions for adjusting the *Plan* to these changes that the museum planners heard from the leadership of the proposed Museum during a joint meeting of the US Coast Guard and Association leaders on November 29, 2017, held in Washington, DC at the Coast Guard Headquarters.

Top Changes Since 2013

- Four years of: Inflation; population growth; museum attendance trends; economic change
- NCGMA now has full-time professional staff and an office
- The City of New London is in better shape with new development occurring
- Potential parking issues are being addressed
- Permitting appears to be advancing
- Opening now planned for 2022
- Larger building – more GSF allowing more program spaces
- Expand concept to a heritage and interactive discovery center
- Increased number of program spaces
- Visitor interpretive and educational plan conceptualized
- The Coast Guard is funded for \$5M/3yr to spend on the Museum's Visitor Experience Zone (also known as the exhibits)
- New building layout: Schematic Design completed
- Both overpass and at-grade access lead to one entrance
- The Startup Budget, combining pre-opening and capital costs from multiple sources, is \$150 million (2017\$)

Mission, Purposes, Values, Audiences & Supporters

The Museum's intentional purposes are restored to the 2008 levels because flexible spaces that can be used for other purposes in the winter have been added. These added spaces, plus the Visitor Experience Zone spaces, allow the Museum to better serve its purposes.

The new Museum is seen as a part of a rejuvenated downtown waterfront, and the Museum's new program spaces enable community and resident relationships. Younger donors are looking for measurable impacts on social issues of significance. They respond well to program initiatives targeting social needs, ideally in partnership with other organizations. Science technology, engineering and mathematics (STEM) learning skills have become more important to the Coast Guard and to Connecticut's future economy. There is a need for resources to engage youth in STEM learning.

Audiences

Policy guidance from Coast Guard leadership in November 2017 refined the following priorities with regard to the Museum's audiences:

- Primarily for tourists
- Secondly for local residents, regional school children and teachers
- More adult in tone, while welcoming the family audience as well
- Serving the public takes precedence over serving the Coast Guard family, although the Coast Guard family's interests can still be met in many ways
- The Museum's programs and components can serve the Coast Guard Academy as well

Visitors and Program Participants (Changes since 2013)

New London and SE CT are growing. New jobs, downtown revival, increased tourist traffic. The new work force is younger, more educated and wants to live downtown.

Museum Components

Preliminary Master Interpretive Plan (May, 2017) by the Museum Exhibit Advisory Panel (MEAP) identifies thematic wings and galleries, and expands the concept to a heritage and interactive discovery center. The Museum Education Initiative is underway developing three sample programs: STEM School Program; Qualifications Program and Virtual Shipmate.

Role of collections is clearer: the Museum is not the steward to the collection, but the recipient of long-term placement of collection objects.

The Feature Theater will help fill a void as a black box. A 150-seat theater was identified as a need in New London.

The Museum's components are listed below and in the "Architectural Program," Chapter 20. Many components are not yet explicit in Payette's architectural plans, but are assumed to fit within that design's broad categories.

Museum Components
National Coast Guard Museum

Drop-off Zone
Outdoor Park (by City)
Exterior Exhibits
Piers and Wharves [by City]
The Visitor Experience Zone Zone (Free Access)
Entrance Lobby
Welcome Center
Visitor Amenities
Registration Kiosk
Coast Guard Gallery
The Gift Shop and Food Service
The Feature Theater
Museum Galleries (3 Decks and 6 Wings)
Margin of Excellence Spaces (Scheduled Access)
STEM Learning Center
Early Learning Center
Event Center and Waterview Terrace
Digital Web Programs
Support Facilities (Offices, Workrooms, etc.)
On-site Support
Off-site Support (Walkable Downtown Space)

Table 0.1

Source: United States Coast Guard; National Coast Guard Museum; Payette and White Oak Associates, Inc.

Development of the Visitor Experience Zone

The *Visitor Experience Zone*, the main Museum offering, includes the Lobby, Feature Theater and the Museum Galleries. The Visitor Experience Zone is operated by the US Coast Guard and is free to the general public. Separately, but in support of the Visitor Experience Zone, the Margin of Excellence Spaces can be run by the Association on a fee basis to the public.

In order to achieve the most successful Museum, the design scope for the *Visitor Experience Zone* (also known as the exhibits) should follow these principles:

- The National Coast Guard Museum's Visitor Experience Zone will be designed and developed under the direction and supervision of the Coast Guard Historian's Office.
- The Visitor Experience Zone will be self-sufficient and able to stand on its own, technically, artistically and educationally.
 - *Programs*, defined below, can be layered on top of the Visitor Experience Zone as extra value, but are not necessary to the free Visitor Experience Zone.
- The Visitor Experience Zone will be most effective and efficient at achieving the Coast Guard's and the Museum's objectives if it is conceived and designed as an integrated experience by one team of experienced visitor experience designers, facilitated by a strategically allocated budget responsible for the whole Visitor Experience Zone.
- The entire Visitor Experience Zone will be artifact-based, following on the language of the 2007 Museum Services Act: [A museum is] "a public or private nonprofit agency or institution

organized on a permanent basis for essentially educational or aesthetic purposes, which, utilizing a professional staff, owns or utilizes tangible objects [also known as artifacts], cares for them, and exhibits them to the public on a regular basis.” (Public Law 111-340, 2010).

- The territory of the Visitor Experience Zone is labeled in the Architectural Program in Chapter 20. The public spaces in the VE Zone total 39,110 NSF.
 - The *wings* will be designed by the architect and later subdivided into *galleries* and *hubs* by the Visitor Experience Zone designer.
- Three of the large capital scopes have adjoining boundaries, so that edges need to be defined to clarify who does what and who is paying: The building, the visitor experience and the programs. The building will include all building spaces and their built-in finishes, cabinetry and infrastructure. The Visitor Experience Zone will include such elements as exhibits, environments, graphics, media, lighting, wiring, data feeds, furnishings, etc. The programs will include all scheduled activities that may use the building. School group tours, lectures, volunteer shifts, audio tours and private events are all programs. Some programs may be charged for.

Collections

The role of collections is clearer: the Museum is not the steward of the whole Coast Guard collection (the Heritage Asset Collection), but the location of *selected objects* from the Collection. This is because the Museum is a startup, with both staff maturity and architectural stability expected only several years after opening. It is premature to entrust the management of the Coast Guard’s collections to the Museum (except for loaned objects) until it is both professionally and spatially ready to take on stewardship of some or all of the collection at some nearby but offsite location. This means that the current management and funding for the Coast Guard’s collections should continue until sometime after the Museum has opened.

Several facilities are relevant to the *Master Plan* for the National Coast Guard Museum (NCGM and the “Museum”): the existing Coast Guard Museum (CGM) in Waesche Hall at the Coast Guard Academy (CGA); the Exhibit Center storage facility in Forestville, Maryland, and the future Museum. These facilities will play different roles in different phases: 1) before construction starts on the Museum (“now” and “status quo”); 2) during construction; 3) during the early years of operation; and 4) after stabilization of operations and staffing.

The *Plan* assumes that the visitor experience designers will incorporate objects from the Heritage Asset Collection into the new Museum’s exhibits and media (the *selected objects*). All of these will be on location from the Collection assigned to the Museum. Some assignments will be *long-term* for use in long-term exhibits; others will be *multi-year* for use in touring exhibitions; others will be *periodic* for changing installations at the Museum, and others will be *short-term* for filming and media use.

The stewardship of the whole Heritage Asset Collection by the Museum is not contemplated by this *Plan*, except for those selected objects it has borrowed.

Heritage Asset Collection and Facility Roles
National Coast Guard Museum

		CG Museum	Exhibit Center	NCGM
1	Before Construction	Status quo	Status quo	--
2	During Construction	Redesign to focus on CGA needs Separate objects selected for the NCGM	Prepare objects selected for the NCGM	Incorporate selected objects into exhibits
3	Early Years of Operation	Focus on CGA needs	Status quo	Exhibit selected objects
4	After Stabilization	Focus on CGA needs	Status quo Study central storage relocation	Exhibit selected objects Study central storage relocation

Table 0.2

Source: White Oak Associates, Inc.

Museum Programming

“Programming” is what the Museum does day-to-day with the building and its exhibits. For practical and economic reasons, it is useful to subdivide the Museum’s audiences into *visitors*, who seek admission to the visitor experience, and *program participants* who engage in the Museum’s programs. While exhibits happen in space, programs happen in time, frequently scheduled. Programs enable the Museum to consistently reach and engage a more diverse set of audiences in the community.

The new site and current design offer more for a membership program based on repeat visits.

Multi-purpose and Flexible Spaces

Given the tight limits on space, an emphasis on designing and outfitting spaces for multiple functions makes sense for key spaces, and the planners suggest that the following spaces in the Architectural Program (see Chapter 20) be positioned and equipped as multi-purpose spaces, with the net effect of increasing the Museum’s ability to offer programs for residents, particularly off-season:

- Lobby
- The Feature Theater
- The Event Center and Outdoor Patio
- The Changing Gallery
- The STEM Learning Center
- The Early Learning Gallery

Organization

Through education programs, the exhibits and public spaces of the institution will be enlivened and transformed by greeters, docents and staff educators interacting with program participants and visitors. The STEM Learning Center is the Museum’s education department as well as a series of

spaces in the new Museum and an array of Margin of Excellence Programs that enrich the Museum and its Visitor Experience Zone.

To achieve these objectives, the following areas of activity, budgeting and staffing have been defined in Chapter 15, “Museum Programing”:

- **People-to-People Programs** (connecting Coast Guard people with educators and learners)
- **Group programs**
- **Individual Programs**
- **Margin of Excellence Programs**

Market and Attendance

The New London market environment continues to look good vis a vis the Museum with the downtown continuing to see renovation of existing buildings and new development. The city is also addressing traffic and parking concerns, including the plan to add 400 parking spaces to the Water Street Garage, which will have a pedestrian bridge leading to the Museum and adjacent ferry terminal.

The defined market segments, from which the Museum will attract visitors and participants, have remained the same since *Addendum 2014*, except for the deletion of cruise ship passengers. The four markets are: residents (within a 45-minute drive and additional residents within a 70-minute drive), children in school groups, overnight tourists and ferry terminal passengers. Cruise ships are no longer coming to New London.

Overall, the resident population has increased by 382,000 persons. Increases since 2013 are from those living within a 45-70 minute drive of the Museum. Population in the Primary Market declined during that period. Projected resident population for 2025, a “stable” year of operations four years after the Museum opens, shows an increase of 101,000 persons over 2017 numbers. The school population has declined, but note that in 2007 two additional RI counties were included in the market and they were not part of the 2013 or 2017 markets. The 2017 overnight tourist population is estimated to be the same. The number of ferry passengers has increased.

Except for the school population, all markets are expected to see an increase in population through at least 2025.

Comparison of Market Segment Population

National Coast Guard Museum

Market Segment Populations for Years:	2007	2013	2017	Projected 2025
Primary Market: Population with 45-min drive	440,685	571,623	548,183	600,533
Secondary Market: Add'l Population w/in 70-min drive	2,097,184	2,137,683	2,372,142	2,421,183
PK-12 School Children	411,365	260,812	243,528	232,000
Subtotal Resident Market	2,949,234	2,970,118	3,163,833	3,253,716
Overnight Tourists Southeastern CT	5,900,000	5,900,000	5,900,000	5,989,000
Ferry Terminal Passengers	n/ap	1,300,000	1,500,000	1,750,000
Cruise Ship Passengers to New London	11,000	11,000	0	0
Total/Cumulative	8,860,234	10,181,118	10,563,833	10,992,716

Table 0.3

Source: White Oak Associates, Inc.

The estimated attendance potential has increased since both the 2008 *Plan* and *Addendum 2014*. Attracting ferry passengers will be key to achieving the attendance potential as the largest number of visitors is expected to come from ferry passengers.

The higher attendance potential reflects:

- An increase in the size of the exhibit galleries
- The addition of the STEM Learning Center
- The addition of the Early Learning Gallery
- The addition of the Feature Theater
- The projected increase in population
- The projected increase in the number of ferry passengers
- Continued improvement in the City of New London

2025 Stable Year Four Medium Scenario Attendance Potential

National Coast Guard Museum

Stable Year 4 Market Segment	Medium Share of	
	Attd	Total
Primary Market: Population with 45-min drive	66,000	19%
Secondary Market: Add'l Population w /in 70-min drive	36,000	11%
PK-12 School Children in 5-County Market	9,000	3%
Overnight Tourists to Southeastern CT	75,000	22%
Ferry Terminal Passengers	158,000	46%
Total/Cumulative	344,000	100.0%
Nominal Attendance Range	344,000	
Budget Number for Operating Pro Forma	292,000	
Total Resident	32%	
Total Tourist	68%	

Table 0.4

Source: White Oak Associates, Inc.

Comparison of Stable Year Four Attendance Potential by Market Segment
2008 Plan versus 2014 Addendum
National Coast Guard Museum

Market Segment	2008 Master Plan			Addendum 2014			Addendum 2017		
	Market Capture	Medium Attd	Share of Total	Market Capture	Medium Attd	Share of Total	Market Capture	Medium Attd	Share of Total
Primary Market: Population with 45-min drive	10.5%	46,272	20%	10.0%	59,000	20%	11.0%	66,000	19%
Secondary Market: Add'l Population w/in 70-min drive	3.0%	62,916	27%	1.5%	33,000	11%	1.5%	36,000	11%
PK-12 School Children in 5- or 7-County Market	1.4%	5,656	2%	3.00%	7,000	2%	4.0%	9,000	3%
Overnight Tourists to Southeastern CT	2.0%	118,000	51%	1.3%	74,000	24%	1.3%	75,000	22%
Ferry Terminal Passengers				10.0%	130,000	43%	9.0%	158,000	46%
Cruise Ship Passengers to New London	6.5%	715	0.3%	15.0%	320	0%			
Total/Cumulative	2.6%	233,559	100.0%	3.0%	303,320	100.0%	3.1%	344,000	100.0%
Nominal Attendance Range		234,000			303,000			344,000	
Budget Number for Operating Pro Forma		220,000			242,000			292,000	
Total Resident		49%			33%			32%	
Total Tourist		51%			67%			68%	

Table 0.5

Sources: eSite Analytics, Milone and McBroom New London Downtown Transportation and Parking Study and White Oak Associates, Inc.

Earned Revenue Opportunities

Changes in the building design and components have increased some of the opportunities for earned revenue. Changes include:

- A larger gift shop based on White Oak's recommended sizing in this *Addendum 2017*.
- The addition of the STEM Learning Center, re-instating a space that was in the 2008 *Plan* but removed in *Addendum 2014* because of building size limitations. The Association will be able to provide fee-based programs in the STEM Learning Center.
- The Event Center and adjacent catering will provide a spectacular setting for function rentals and events. It can also be used for additional programs in seasons when function rentals are not as popular.
- The Feature Theater was put back into the program. The Association will be able to offer films, lectures and other programs in the evening. During the day the Coast Guard signature film will be shown for free.

These opportunities will provide a Margin of Excellence programming at the Museum, enhancing the Visitor Experience Zone.

Phasing in Earned Revenue

In the first years after opening, the Association is likely to launch various revenue-generating ventures such as the gift shop, the event center and fee-based programs in the STEM Learning Center. Once these revenue initiatives mature, they have good potential to contribute to the Museum in some way.

The Association is starting to think about post opening programs, but is mostly focused on startup. Three sample programs are in development as proof of concept, after which the Association may scale up those concepts into a financially sustainable operation or Program Department. The gift shop and event center are placeholders awaiting research and development by the Association.

In the past, models have used numbers from comparable museums to look at potential net contributions from such programs. Now, the Association is planning their own money-making ventures, but they are not near a business plan with a bottom line contribution to the Museum.

One of the project risks is that the Association will generate no net cash to the Museum, particularly during the early years when the Association is still finishing the building and paying off bridge loans. The current Association has said they want to go out of business on opening, leaving to a future non-profit the operation of the revenue centers.

The best way to mitigate this likely risk is to make sure the Coast Guard has enough resources to operate the Museum successfully without any net from the Association. This is the assumption of *Addendum 2017*, which focuses on just the Coast Guard budget.

Architectural & Systems Program

At this writing, schematic design has just completed, and the initial plans of November 17, 2017 and December 19, 2017 have been used for analysis and as the stimulus for a revised recommended architectural program.

The Architectural Program focuses on the Coast Guard's needed on-site support spaces, and does not include the Association's support needs as those have not been defined. Once those are understood, the Association, who are contracting the Architects can: a) fit support spaces within the Event Center, Gift Shop and STEM Learning Center; b) assign some of any additional NSF found from either a larger building or a more efficient gross-up; c) reduce public space, and/or d) decide to operate off-site.

Although the space allocated to the required administrative spaces has increased in Schematic Design (to 1,925 NSF), it still falls short of what White Oak has determined is the absolute minimum space needed to operate the Museum. To put these numbers into perspective, Table 20.3 illustrates the administrative space that exists in eight new museums of varying types and sizes and compares them to the Payette space allocation in terms of their percentage of total museum net area. White Oak recommends that at least 3,415 NSF (6.8% of total net museum area) be allocated to the required administrative spaces.

It is imperative that a process be developed quickly for identifying the best locations for the various specific program functions (e.g.: STEM Center, Early Learning Center, etc.) that will, by necessity, be carved out of space currently identified as "exhibit space." While some flexibility in the spaces on the three Gallery Levels is clearly desirable, it must not be left to the exhibit designers (or their budgets) to identify and differentiate these program spaces in a well-defined choreography of the visitors' experience that couples each program space with carefully considered programmatic and architectural support. White Oak strongly supports the understanding that arose out of the October 2017 team meeting in Boston that Payette would define the demising walls of the five wings and the program and support spaces, leaving the interior subdivision of the galleries to the exhibit designers. While White Oak would certainly endorse a more collaborative process between architects and designers, such a process needs to be firmly in place early in Design Development.

Changes in the Payette Schematic Design (March-May, 2018)

- Although the total area of the building has grown in the course of Schematic Design (for reasons the architects describe as technical), they also advise that it will likely shrink during Design

Development. Consequently, White Oak recommends that the architectural program not be increased in size at this point.

- The Payette schematic plan benefits significantly from the reduction of public entrances to one primary visitor entrance.
- The location of the primary visitor entrance has moved to the interior of the building along its south side. It serves visitors arriving from two approaches: the Pedestrian Bridge and an entrance on the ground level from the City Pier Plaza area.
- The Café has been deleted as recommended by marketing analysis. A modest snack counter is being contemplated by the team either in or near the Museum Shop. On busy days, this small amenity would possibly be augmented by mobile food service, especially outside in good weather.
- The size of the Museum Shop has been significantly increased to make it attractive for an outside operator and facilitate its use as a multi-purpose space.
- There is currently very little (750 NSF) space assigned to the basic maintenance of exhibits or the collection artifacts used in them. It is understood by the team that such spaces will need to be accommodated on-site, presumably carved from space currently assigned to galleries.

Capacity, Parking and Design Day Calculations National Coast Guard Museum

<i>Assumptions</i>		
Typical Year Attendance	292,000	Site Visits Per Year
Extraordinary Loading Factor	20%	In addition to Typical Year
Max Building Demand Will Be:	350,400	Facility Visits per Year
Highest Month Capture Ratio:	14%	Peak Month Share of the Yearly Total
Highest Day-of-Week Capture Ratio:	23%	Peak Day's Share of a Summer Week
Number of Weeks in a Month	4.33	Fifty-two Weeks Divided by 12 Months
Average Dwell Time:	1.50	Hours for the Average Visit
Peak Dwell Time Capture Ratio:	40%	Of Design Day During Heaviest Hours
Visitors Arriving by Car:	80%	During Summer Weekends
Visitors per Car:	2.7	During Summer Weekends
Volunteer (6) & Staff Size (27.25)	33.25	On-site at One Time During Weekends
Staff per Car	1.1	Accounts for Car Pools, Bikes, Walking, Etc.
<i>Calculations</i>		
Design Day Capacity:	2,606	Visitors on a typical August weekend day
Peak Momentary Capacity:	1,042	Design Capacity (Code Capacity should be higher)
Hourly Peak Flow:	695	Visitors/hour processing speed
Peak Flow:	12	Visitors/minute processing speed
Peak Car Parking:	309	Cars (weekends, principally)
Staff & Volunteer Parking:	30	
Total Parking	339	

Table 0.6

Source: Connecticut's Vision Index (Autumn 2016); Visitor Seasonality (2014-2016); White Oak Associates, Inc.

Comparison of Net Program Spaces (v. 6.3)
National Coast Guard Museum

	2008 White Oak Program	2014 Addendum Concept	2017 Payette Prelim Design	2017 White Oak Program	White Oak Program % of Net	2018 Payette Schematic Design	Payette Schematic % of Net Areas	Change from Prelim to Schematic
Entry, Lobby, Free Zone Amenities	1,775	2,000	4,600	2,910	5.8%	6,247	11.4%	1,647
Museum Store & Café	3,970	1,400	800	2,350	4.6%	2,398	4.4%	1,598
Galleries	22,170	26,400	32,100	26,925	53.3%	34,882	63.5%	2,782
Feature Theater	5,050	0	2,600	3,200	6.3%	2,862	5.2%	262
Simulation Center	1,000	0	0	0	0.0%	0	0.0%	0
Lecture Space	0	1,800	0	0	0.0%	0	0.0%	0
STEM Learning Center	2,055	0	3,950	4,600	9.1%	0	0.0%	-3,950
Event Space w/Catering Kitchen	0	5,400	4,100	4,355	8.6%	5,108	9.3%	1,008
Collections Center	2,525	0	0	400	0.8%	0	0.0%	0
Administrative	3,205	1,800	1,450	3,415	6.8%	1,925	3.5%	475
Facility Support Areas (Net)	2,420	3,000	950	2,395	4.7%	1,522	2.8%	572
Total Net Museum Floor Area	44,170	41,800	50,550	50,550	100.0%	54,944	100.0%	4,394
Gross-up Areas (GSF)	17,668	12,500	17,775	17,775		25,599		7,824
Total Museum Floor Area	61,838	54,300	68,325	68,325		80,543		12,218
Eagle Storage (NIC)	0	0	0	0		1,042		1,042
Total Building Floor Area	61,838	54,300	68,325	68,325		81,585		13,260

Table 0.7

Source: Payette Architects; White Oak Associates, Inc.

Table 20.3 lists each separate space over six pages, totaling the same 68,325 GSF as the above table.

Public Relations

One of the Museum's main roles is symbolic: The Museum is the public face of the US Coast Guard. The Museum is where the Coast Guard tells its story. The Museum is a public forum for the Coast Guard's messages. The Museum is the first door to involvement with the Coast Guard. The Museum is the Coast Guard's public platform.

The public success of the National Coast Guard Museum will hinge on communicating various combinations of ideas and information to specific markets at specific times. The complete public relations message, divides into four categories:

- 1 Key Messages** describe how the facility will be positioned in the marketplace, what differentiates it from its competition, and how it is perceived in the marketplace. This positioning is akin to staking a claim in the market.
- 2 Promises** are what the Museum wants the audience to believe they will receive by visiting. These are the ideal experiences that the public relations campaign offers and communicates to the public.
- 3 Ideal Reactions** are the desired feelings and perceived benefits to the visitors to National Coast Guard Museum. These are the comments the Welcome Team wants to hear as people leave the

Museum. Ideally, these reactions are produced when the promises are delivered. This is what the "word-of-mouth" wants to be.

- 4 **Key Facts** are the details and logistics, such as prices, parking, show times, directions, etc., which will be communicated through publicity and collateral materials.

Staffing

The biggest change in staffing since *Addendum 2017* and the 2008 *Master Plan* is that salaries, in addition to inflation-adjustment for four years since 2013, are now tied to Coast Guard document CG-833 Fiscal Year 2018 Reimbursable Personnel Cost (RPC), which includes annualized salaries for civilian and military grade levels, including for FY 2017. Previously salaries were based on the locality grade levels for the Hartford-Willimantic, CT area. In addition, as recommended by the Coast Guard, Step 10 salaries were used for new hires as opposed to Step 5, used in previous reports and taken from the Hartford-Willimantic pay scale.

Three positions had increases in grade levels to reflect increased responsibilities.

Several positions were added in order to support the higher level of attendance, a larger building and programming for the STEM Learning Center, a venue re-instated since *Addendum 2014*. The position of a Deputy Director was added. The person serving as Deputy Director is currently on staff and is part of CG-0923, the Office of External Outreach and Heritage. This position is integral to the planning and development of the Museum prior to opening and is responsible for all oversight, hiring (prior to the start of the Museum Director position) and coordination of meetings and interface with key Museum project and Coast Guard personnel who are critical to the Museum enterprise. Once open, the Deputy Director, similar to a COO, will oversee operations of the Museum, allowing the Museum Director to focus externally on partnerships, the local, regional and national communities, Association staff and the Coast Guard.

Based on the current building and programs the Museum is budgeted to have 32.40 full-time equivalent (FTE) staff annually. This does not include staff of the Association. Four of the positions are enlisted personnel and 28.40 are civilian. Prior staffing levels did not include enlisted personnel. This was suggested by the Coast Guard and White Oak agrees that it is a good idea to have personnel in uniform on-site to interact with visitors and support the Museum in other ways as well. Having civilian and military personnel more adequately reflects the Coast Guard.

The staffing level of 32.40 FTEs (full-term equivalent) is optimal, and, with the addition of part-time seasonal gallery interpreters/greeters in the peak summer months, is designed to handle the projected increase in attendance compared to prior reports. The staff level should be sufficient to accommodate both the budget level attendance potential of 292,000 and the higher target level of 344,000. There are provisions for additional contract labor if temporary personnel are needed.

Custodial and security is now planned to be contracted out, previously they were part of Coast Guard staff. Security was increased to cover hours when the Museum is closed so that there will be 24/7 coverage.

The anticipated annual salaries, including benefits, total \$3.1 million. In inflation-adjusted dollars and based on average GS historical pay increases, staffing costs, including benefits, were \$2.1 million (2008 *Plan*) and \$2.3 million (*Addendum 2014*).

Comparison of Staffing (2008 Master Plan and Addenda)
National Coast Guard Museum

	Addend '17	2008 Plan	Addendum '14	Addendum '17
NCGM Position/Title	Status	FTE's		
ADMINISTRATION				
Museum Director	FT perm	1.0	1.0	1.0
Executive Assistant	FT perm	0.75	0.75	1.0
Deputy Director	FT perm			1.0
Assistant to the Deputy Director	FT perm			1.0
SR Accountant Liasion to USCG Hdqtrs (Acct, HR, Payroll)	FT perm	1.0	1.0	1.0
Procurement Liaison	FT perm			1.0
Acct. Clerk / Bookkeeper	PT perm	0.5		0.5
Community Liaison and Public Relations	FT Perm	1.0	1.0	1.0
Community Liaison Assistant	PT perm			0.5
Web and Social Media	FT perm		1.0	1.0
Director of NCGM Facilities/Security	FT perm	1.0	1.0	1.0
Facility Maintenance Engineer/Supervisor	FT perm			1.0
Facilities Technician - Engineer (Thtr, Exhibits, Facility)	FT perm	1.0	1.5	1.0
Information Technology Mgr.	FT perm	1.0	1.0	1.0
Security Staff CONTRACT Labor		1.5	1.5	contract
Custodians / Groundskeepers CONTRACT Labor		2.8	3.0	contract
SUBTOTAL - ADMINISTRATION		11.55	12.75	13.00
EXHIBITS, COLLECTIONS, PUBLIC PROGRAMS & EVENTS				
Director Exhibits & Programs	FT perm	1.0	1.0	1.0
Administrative Assistant	PT perm	0.5	0.5	1.0
Curator of Exhibits & Collections	FT perm	1.0	1.0	1.0
Museum/Collections Technician	FT perm			1.0
Exhibit Maint/Changeover Tech	FT perm	1.0	1.0	1.0
Education Specialist: Programs	FT perm	1.0	1.0	1.0
Education Asst: Programs	FT perm	0.5		1.0
Visitor Services and Events Manager	FT perm	1.0	1.0	1.0
Visitor Services Assistant	FT perm			1.0
Volunteer Manager (docent Training)	FT perm	1.0	1.0	1.0
Gallery Interpreters/Greeters/Floor Staff	PT perm	2.8	5.5	5.4
Military Personnel:				
Military 1 Command Silver Badge	FT perm			1.0
Military 2 Storekeeper	FT perm			1.0
Military 3 Public Affairs Officer	FT perm			1.0
Military 4 Yeoman	FT perm			1.0
SUBTOTAL EXHIBITS & PUBLIC PROGRAMS		9.80	12.00	19.40
SUBTOTAL USCG - CIVILIAN & MILITARY		21.35	24.75	32.40
Salaries w. Benefits (all in 2017\$)				
		\$2,091,522	\$ 2,264,311	\$3,079,535

Table 0.8

Source: United States Coast Guard and White Oak Associates, Inc.

Staff will need to be on board before opening, some as few as a few months and some years in advance. Table 0.9 presents suggested hiring dates for each position. The dates are for when staff need to be in place, which means they must be hired in advance.

Pre-Opening Staff Hiring Dates and Costs
National Coast Guard Museum

	Months Pre Opening	# Days Pre open	Date Position Starts	Monthly Rate w Benefits
ADMINISTRATION				
Opening Date May 28, 2022				
Museum Director	48	1454	6/4/2018	\$ 17,386
Executive Assistant	14	420	4/3/2021	\$ 6,194
Deputy Director	65	1950	1/24/2017	\$ 15,003
Assistant to the Deputy Director	14	420	4/3/2021	\$ 6,194
SR Accountant Liaison to USCG Hdqtrs (Acct, HR, Payroll)	10	300	8/1/2021	\$ 7,794
Procurement Liaison	48	1454	6/4/2018	\$ 6,711
Acct. Clerk / Bookkeeper III	6	180	11/29/2021	\$ 2,839
Community Liaison and Public Relations	18	540	12/4/2020	\$ 10,786
Community Liaison Assistant	8	240	9/30/2021	\$ 3,097
Web and Social Media	16	480	2/2/2021	\$ 6,711
Director of NCGM Facilities/Security	48	1454	6/4/2018	\$ 12,811
Facility Maintenance Engineer/Supervisor	10	300	8/1/2021	\$ 7,794
Facilities Technician - Engineer (Tnter, Exhibits, Facility)	6	180	11/29/2021	\$ 6,711
Information Technology Manager	6	180	11/29/2021	\$ 10,786
Security Staff CONTRACT Labor	6	180	11/29/2021	
Custodians/Groundskeepers CONTRACT Labor	6	180	11/29/2021	
EXHIBITS AND PROGRAMS				
Director Exhibits & Programs	48	1454	6/4/2018	\$ 12,811
Administrative Assistant	12	360	6/2/2021	\$ 5,678
Curator of Exhibits & Heritage Asset Collections	12	360	6/2/2021	\$ 10,786
Museum/Collections Technician	3	90	2/27/2022	\$ 7,794
Exhibit Maint/Changeover Tech.	6	180	11/29/2021	\$ 6,711
Education Specialist: Programs	48	1454	6/4/2018	\$ 7,794
Education Asst: Programs	2	60	3/29/2022	\$ 6,194
Visitor Services and Events Manager	9	270	8/31/2021	\$ 7,794
Visitor Services Assistant	4	120	1/28/2022	\$ 6,711
Volunteer Manager (docent Training)	9	270	8/31/2021	\$ 6,711
Volunteer Docents				
Gallery Interpreters/Greeters/Floor Staff	3	90	2/27/2022	\$ 21,569
Gallery Interpreters/Greeters/Floor Summer CONTRACT	3	90	2/27/2022	
Military Personnel:				
Military 1 Command Silver Badge	3	90	2/27/2022	\$ 12,193
Military 2 Storekeeper	3	90	2/27/2022	\$ 7,688
Military 3 Public Affairs Officer	3	90	2/27/2022	\$ 7,688
Military 4 Yeoman	3	90	2/27/2022	\$ 7,688

Table 0.9

Source: United States Coast Guard and White Oak Associates, Inc.

Five Year Operating Profile

The Coast Guard will be responsible for general administration and finance, facility maintenance and upkeep, exhibit maintenance and annual change, free programs, collections maintenance and preservation for objects on loan, Internet access and information systems, community relations and all aspects of visitor services such as gallery staffing and managing volunteers that are not related to earned revenue. The use of volunteers will follow government guidelines.

Table 0.10 presents the current assumption for responsibilities to be covered by the Coast Guard and those by the Association. In order to provide a great visitor experience there should be a high degree of collaboration between the two organizations.

Departments and Activities by Organization
National Coast Guard Museum

USCG	Association
Admin, Finance and Human Resources	Development and Fundraising
Community Liaison and Public Relations	Marketing and Advertising
Programs, Events and Theater	Programs and Theater
Exhibits, Education, Heritage Asset Collections	Special Events and Evening Initiatives
Volunteers	Gift Shop and Food Service
Visitor Services	Function Rentals and Catering
Facility, Grounds and Security	Exterior Campus (e.g. bringing ships in)

Table 0.10

Source: White Oak Associates, Inc.

The annual operating budgets developed in this *Addendum 2017* reflect changes to the building size, its new components (Feature Theater, STEM Learning Center and Early Learning Gallery), programs in those areas and adjustments in staffing.

Summary and departmental operating budgets were developed for the first five years of Museum operations. Table 0.11 presents the five-year operating budget in 2017\$ and Table 0.12 in inflation-adjusted dollars. Opening year is anticipated to be 2022, with a stable operating year in 2025, four years after opening. A stable year is one in which attendance trends are related more to programming choices and marketing than the excitement surrounding a new facility in the first years after it opens. The budget is based on full years starting in May of 2022, not calendar or fiscal years.

Year one will have some savings assuming maintenance for equipment and some items covered by warranties.

USCG Summary Operating Budget (2017\$)
National Coast Guard Museum

NCGM Budget 2017\$	Future Yr 1	Year 1 2022	Year 2 2023	Year 3 2024	Stable Yr 4 2025	Year 5 2026	Yr 4
<i>On-Site Attendance</i>		321,200	335,800	277,400	292,000	297,840	
EXPENSES							
Salaries and Benefits	52%	\$3,079,535	\$3,079,535	\$3,079,535	\$3,079,535	\$3,079,535	50%
Visitor Services & Programs	5%						7%
Exhibits and Programs	3%	\$163,900	\$263,866	\$313,866	\$328,866	\$323,866	5%
Feature Theater	0%	\$24,600	\$35,600	\$35,600	\$35,600	\$35,600	1%
Visitor Services	2%	\$93,400	\$84,273	\$79,273	\$89,823	\$86,273	1%
Overhead & Support	43%						43%
Admin & Finance	1%	\$47,850	\$50,300	\$50,300	\$50,300	\$50,300	1%
Information Services	2%	\$145,000	\$172,550	\$172,550	\$190,550	\$172,550	3%
Director's Office	1%	\$55,200	\$54,800	\$54,800	\$54,800	\$54,800	1%
Deputy Director's Office	1%	\$34,200	\$32,800	\$32,800	\$32,800	\$32,800	1%
Community Relations	4%	\$218,150	\$174,500	\$174,500	\$189,250	\$189,250	3%
Off-site Storage	2%	\$129,778	\$128,578	\$127,378	\$126,178	\$124,978	2%
Facilities	32%	\$1,917,449	\$1,988,733	\$1,988,733	\$1,998,733	\$1,988,733	32%
TOTAL OPERATING EXPENSES	100%	\$5,909,062	\$6,065,535	\$6,109,335	\$6,176,435	\$6,138,685	100%

Table 0.11

Source: White Oak Associates, Inc.

USCG Summary Operating Budget
Inflation-Adjusted Dollars
National Coast Guard Museum

Inflation Rate - Personnel	1.10	1.12	1.14	1.16	1.18	
Inflation Rate - Facility Costs	1.28	1.34	1.41	1.48	1.55	
Inflation Rate Other Costs	Yr 1	1.13	1.16	1.19	1.22	1.25
	1	2022	2023	2024	2025	2026
Inflation Adjusted NCGM Budget	Year 1	Year 2	Year 3	Year 4	Year 5	
	2022	2023	2024	2025	2026	
<i>On-Site Attendance</i>	321,200	335,800	277,400	292,000	297,840	
EXPENSES						
Salaries and Benefits	49%	\$3,383,421	\$3,447,706	\$3,513,213	\$3,579,964	\$3,647,983 45%
Visitor Services & Programs	5%					7%
Exhibits and Programs	3%	\$185,438	\$306,004	\$373,088	\$400,692	\$404,465 5%
Feature Theater	0%	\$27,833	\$41,285	\$42,317	\$43,375	\$44,460 1%
Visitor Services	2%	\$105,674	\$97,731	\$94,231	\$109,441	\$107,743 1%
Overhead & Support	46%					47%
Admin, HR & Finance	1%	\$54,138	\$58,333	\$59,791	\$61,286	\$62,818 1%
Information Services	2%	\$184,054	\$200,105	\$205,108	\$232,167	\$215,491 3%
Director's Office	1%	\$62,454	\$63,551	\$65,140	\$66,768	\$68,438 1%
Deputy Director's Office	1%	\$38,694	\$38,038	\$38,989	\$39,964	\$40,963 1%
Community Relations	4%	\$246,817	\$202,367	\$207,426	\$230,583	\$236,347 3%
Off-site Storage	2%	\$146,832	\$149,111	\$151,412	\$153,736	\$156,080 2%
Facilities	36%	\$2,447,205	\$2,685,092	\$2,798,347	\$2,953,039	\$3,085,177 38%
TOTAL OPERATING EXPENSES	100%	\$6,862,559	\$7,269,323	\$7,549,061	\$7,871,012	\$8,069,965 100%

Table 0.12

Source: White Oak Associates, Inc.

Table 0.13 compares the 2008 *Master Plan* and *Addenda* operating budgets.

Comparison of Stable Year Four Operating Expenses
(Prior Years Inflation-Adjusted to 2017 Dollars)
National Coast Guard Museum

	2008 <i>Master Plan</i>	<i>Addendum</i> 2014	<i>Addendum</i> 2017
Staff	\$ 2,091,522	\$ 2,264,311	\$ 3,079,535
Non-Staff	\$ 1,444,782	\$ 1,506,790	\$ 3,096,900
TOTAL	\$ 3,536,304	\$ 3,771,101	\$ 6,176,435

Table 0.13

Source: White Oak Associates, Inc.

Some of the non-staff increases in cost are due to a larger building plus the addition of the STEM Learning Center and the Feature Theater. A department budget was added for the Deputy Director. The off-site space to be leased increased in size to accommodate storage. Increases were also made related to security coverage and IT needs. Utility costs were changed to follow Coast Guard guidelines of .5% of construction costs, which increased the annual amounts.

In addition to annual operating and maintenance, renewal and improvements will be needed for equipment, exhibits, etc. No significant costs are anticipated until years 4 and 5. Year four includes amounts for computer, equipment and furniture and fixture replacement, as well as exhibit renewal. Exhibit renewal in years four and five, which totals slightly over \$1 million per year, is to renovate approximately 2,500 SF of exhibits in each year.

Building Life Cycle Costs

The building systems and other design features such as roofing materials, flooring, etc. have not yet been specified so a detailed building renewal and maintenance forecast is not possible. At this stage

of planning, a reasonable approach is to assume 2% of building construction costs per year. This is based on a 50-year life cycle of the building. Based on construction costs in the capital budget, excluding inflation, two percent calculates to an average of \$1.38 million annually, or \$69.2 million over 50 years. Certainly the average annual amount will not be needed in early years of the building's life cycle.

Capital Phase and Startup Budget

The Coast Guard reports that the environmental studies are well underway and will be complete by December 2018. The Coast Guard has received funding to start work on the Visitor Experience Zone (also known as the Exhibits). The Association hopes for a 2022 opening, and so this *Addendum '17* assumes a 2Q 2022 opening. This means the first "Typical Stable Year" is assumed to be 2025 in the fourth year of operation.

Key decision points (KDPs) are identified in Tables 25 a & b

The idea that the Association can turn over a completed, debt-free Museum to the Coast Guard on opening day is a clear objective, but one that needs more flexibility, as turn-over is likely to be a period of time, not a single day because: Building and exhibit punch-lists are seldom closed out on opening; final contractor payments may be held pending warranty fulfillment; federal and private foundation grants often require post-opening evaluation and documentation by the grantee; donor pledge payments may extend beyond opening; the building or Association may be in debt, and vendors and abutters may have open business and/or issues.

Overview of the Capital and Pre-Opening Operating Budget (Allocation of Funds)

The Capital and Pre-Opening Operating Budget (the "Startup Budget" as distinct from the "Operating Budget") summarized in Chapter 26 in Tables 26.1 and detailed in Table 26.3 is a recommended *allocation of funds*, given the Museum's conceptual framework and plans as described in this *Addendum 2017*. The responsibility for managing the spending of these funds will be delegated, first to either the Association or to the Coast Guard and then to their *task managers*, who may be contractors, such as building contractors and exhibit producers. Clarifying this division is an upcoming task; for now, the Startup Budget is integrated.

The Startup Budget is at an optimal level for success at a reasonable, but not excessive quality. It collects into one budget estimates from the Association and other sources. Previous budgets had been constrained, resulting in sub-par quality in certain areas.

Comparison Startup Budget
National Coast Guard Museum

	2008	2014	2017	Variance '14-'17
Building Contract	\$30,782,130	\$51,885,000	\$62,811,501	\$10,926,501
Building Associated Overpass	\$8,525,122	\$9,634,100	\$12,562,300	\$2,928,200
Museum Equipment	\$1,513,000	\$1,382,000	\$2,057,500	\$675,500
Indoor Program Costs	\$14,640,065	\$11,791,500	\$23,972,156	\$12,180,656
Project Management	\$4,440,000	\$3,390,000	\$13,689,137	\$10,299,137
Museum Funds	\$5,284,533	\$2,250,884	\$1,721,690	(\$529,194)
TOTAL	\$65,184,850	\$80,333,484	\$136,814,285	\$56,480,801

Table 0.14

Source: National Coast Guard Museum Association, United States Coast Guard, Payette and White Oak Associates

Reasons for Changes: 2008-2017

Since 2008 and 2013, the project has increased in scope, impact and cost. The following changes and additions are the reasons for the increases:

- Overpass added (\$20M)
- Startup costs calculated: Coast Guard (\$3.2M) NCGMA (\$10.4 M)
- Larger building with more activities and components (+\$10.9M)
- Soft costs indexed to construction (+2.9M)
- Higher and more exhibit and program costs (+\$12.1M)
 - STEM Learning Center added
 - Feature film (\$4M) and theater equipment added
 - Exhibit costs per sq. ft. increased to be more interactive
- Previous budgets capped @ \$65M & \$80M, resulting in sub-par allocations
 - Restored budgets to good quality levels
- Inflation – 4 years since 2013; 9 years since 2008

Risks and Mitigations

Chapter 28 summarizes the current risks and possible mitigations at a top-level view. As some risks are addressed, new ones will emerge.

The Association is now a full-time professional team with an office in New London. There is much less risk that the permitting will be denied, and greater chances that the fundraising goals can be met. The project has gained support, the downtown has improved, funds have been identified by both the Association and the Coast Guard, planning has proceeded by both parties, and the architects have completed Schematic Design for a 2022 opening of a new 68,325 GSF Museum.

While all this is positive and a net decline in risk from 2008 and 2013, significant risks remain. Fundraising shortfalls, procedural delays and construction challenges are clear risks, and potential division of funding and responsibility issues may also threaten orderly progress. Command changes

may change directions and increase risk of unshared goals and priorities. The three main issues that lead to trouble in other large projects are:

- Unrealistic/unshared expectations (e.g., budgets and scopes)
- False deadlines
- Lack of communication (the root cause of failure)

Written agreements, Key Decision Points (KDPs), holds and off-ramps are needed to mitigate such risks.

Outcomes for the United States Coast Guard
National Coast Guard Museum

	2013 Change Relative to 2008	2017 Change Relative to 2008	2017 Change Relative to 2013
Increased public awareness and appreciation	Increase	Increase	Equal
Increased engagement with the Coast Guard's programs	Equal	Equal	Increase
Exposure for the Coast Guard's stories and collections	Increase	Increase	Increase
Increased interest in enlistment	Equal	Increase	Increase
Opportunities for commemorations, awards and honors	Increase	Equal	Increase
Closer bonds among the Coast Guard family	Small Increase	Equal	Increase
More public support for Coast Guard initiatives	Small Increase	Increase	Increase
Richer and more meaningful education for Academy and other students	Equal	Equal	Increase
A stronger hometown for the Academy and the Coast Guard	Increase	Increase	Increase

Table 0.15

Source: White Oak Associates, Inc.

Mission, Purposes, Values, Audiences and Supporters

National Coast Guard Museum

Addendum 2017 to Chapters 1 (Vision, Purpose and Values), 3 (The Visitors, Brand Customers and Other Partners) & 4 (Community Service Objectives)



Chapters 1, 3 & 4¹ of the Museum's *Strategic Master Plan* (the *Plan*) describe the shared assumptions related to the Museum's mission, purposes, values, supporters, audiences and other aspects of its *conceptual framework*. This addendum addresses only aspects that have changed enough to merit changes to the *Plan*.

Mission and Intentional Purposes

Interviews and workshops conducted by the museum planners with Coast Guard leaders in 2007/8 agree on the same top priorities for the Museum: Increase awareness of the United States Coast Guard; tell the story, and build engagement. The policy direction indicates that the Museum's secondary purposes are to provide public education, promote enlistment to the Coast Guard, support the Coast Guard family's activities and build public support for the Coast Guard's programs. See Table 1.1.

These priorities have been explored, affirmed and refined over the years, resulting in the following statements:

¹ Chapter 2 referred to the Museum's communities and their needs. Changes to Chapter 2 are listed in Chapter 12, "Market and Attendance" and Attachment B

Mission (2014 Published Statement)

“To build awareness and appreciation of the United States Coast Guard and engagement with its programs by exploring the Coast Guard’s rich history, current life and future potentials through interactive public exhibits, theaters, programs, partnerships and other museum-quality learning experiences.”

The US Coast Guard developed the approved mission statement previously published in the *Strategic Master Plan* and in the *Addendum 14*. Throughout 2017 the Museum Exhibit Advisory Panel (MEAP) worked to refine this mission, and develop a vision statement, with the following published in the Preliminary Master Interpretive Plan in May 2017:

“Mission: The National Coast Guard Museum will engage the public with a variety of artifacts, exhibits, interactive experiences, and educational programs designed to celebrate the Coast Guard men and women and their accomplishments in the past, present, and future.

Vision: The National Coast Guard Museum will inspire, inform, and engage visitors by honoring the courage and skill of the men and women of the United States Coast Guard.”

The National Coast Guard Museum Association’s Mission

“The National Coast Guard Museum Association (NCGMA) is a 501c3 Non-Profit Charitable Organization formed in 2001 to raise funds and apply for and administer federal and state grants for the sole purpose of acquiring land, designing, constructing, developing exhibits and turning over to the US Coast Guard a national museum in the City of New London, Connecticut.”

Changes Relative to Conceptual Framework

- The Museum’s intentional purposes are restored to the 2008 levels because flexible spaces that can be used for other purposes in the winter have been added. These added spaces, plus the visitor experience spaces, allow the Museum to better serve the following intentional purposes:
 - Build awareness and appreciation of the United States Coast Guard
 - Provide an excellent visitor experience that tells the story
 - Provide public education, particularly STEM
 - Build engagement with the Museum
 - Promote interest in joining the Coast Guard
 - Strengthen ties among the Coast Guard family
 - Build public relationships and partnerships
 - Support the Coast Guard Academy
 - Provide economic benefits to New London and the region

- Younger donors are looking for measurable impacts on social issues of significance. They respond well to program initiatives targeting social needs, ideally in partnership with other organizations.
- Science technology, engineering and mathematics (STEM) learning skills have become more important to the Coast Guard and to Connecticut's future economy. There is a need for resources to engage youth in STEM learning.
- The new Museum is seen as a part of a rejuvenated downtown waterfront, and the Museum's new program spaces enable community and resident relationships.
- While keeping the Museum's name, the MEAP committee has expanded the concept to a heritage and interactive discovery center to better engage the general public and youth.

Audiences

Policy guidance from Coast Guard leadership in November 2017 refined the following priorities with regard to the Museum's audiences:

- Primarily for tourists
- Secondly for local residents, regional school children and teachers
- More adult in tone, while welcoming the family audience as well
- Serving the public takes precedence over serving the Coast Guard family, although the Coast Guard family's interests can still be met in many ways
- The Museum's programs and components can serve the Coast Guard Academy as well.

Visitors (Changes since 2013 Detailed in Chapter 12 "Market and Attendance Update")

- Population has changed in composition
- Population has increased
- Attendance ranges may have changed at the comparables
- School enrollment has changed
- More off season resident users of programs, due to increase in program spaces and a good movie theater

Program Participants (Changes since 2013)

- Can now serve residents with changing programs.
- New work force younger, more educated and want to live downtown.

Supporters (Changes since 2013)

The United States Coast Guard

The Coast Guard owns and operates core functions of the Museum, and is therefore, its most significant supporter. The Museum's mission and purposes should primarily serve the Coast Guard and the public that funds it.

The National Coast Guard Museum Association

The National Coast Guard Museum Association (the “Association”) is an independent 501(c)(3) non-profit with a mission to support the Museum. Currently, the Association is raising the funds to build the Museum, which it intends to gift to the Coast Guard. The Association is developing plans to operate the Museum’s revenue-generating components like the Gift Shop after opening. The Association is also planning post-opening fund raising campaigns to pay for *margin of excellence programs* beyond the Coast Guard’s core operating budget. It is too speculative at this stage in their planning to count on net revenues or a steady supply of support funding, so the economic model is focused on core operations funded by the Coast Guard. Support from the Association will help make the Museum even better, but a lack of such funding will not endanger *core operations* as described and budgeted in this *Addendum '17*.

Volunteers

The Museum will be supported in non-monetary ways by individuals volunteering their time as docents, interns, and advisors.

Partners

The Museum will be supported in non-monetary ways by organizations volunteering their in-kind services, promotional activities and audiences.

Purposes, Impacts & Benefits
National Coast Guard Museum

Intentional Purpose	Desired Impact	Beneficiary	Perceived Benefit
Build awareness and appreciation of the United States Coast Guard	The public increases their awareness and appreciation of the Coast Guard	USCG	Increased public awareness and appreciation of the Coast Guard
Provide the general public with a free, excellent and meaningful visitor experience that tells the USCG story	The public is attracted by the quality and relevance of the visitor experience and programs based on the Coast Guard's stories and collections	The Public USCG	Positive connections to the Coast Guard's stories and collections
Provide public education and other services, particularly STEM education	Students develop positive attitudes toward core competencies and STEM skills	Employers State of CT	Pipeline for tomorrow's tech workforce; economic vitality
Build engagement with the Museum	Individuals engage with the Museum's programs	USCG	Increased engagement with the Museum's programs
Promote interest in joining the Coast Guard	Individuals increase their interest in the Coast Guard's programs	USCG	Increased interest Coast Guard in involvement and possibly enlistment
Strengthen the ties among the Coast Guard family	Members of the greater Coast Guard family feel a stronger tie to their CG connection	USCG The USCG Family	Closer bonds among the Coast Guard family and a stronger sense of self-identity and pride.
Build public relationships and partnerships, particularly in New London	Regional organizations and residents engage often with the Museum	New London Residents, CT USCG	Higher quality of life; more public support for Coast Guard initiatives
Support the Coast Guard Academy	The Academy uses the Museum for courses, assignments, commemorations, awards and honors	The Academy	Prestigious, well-equipped venues that honor the CG for events, presentations and programs
Economic benefits to New London and the region	The New London region is stronger economically, educationally and culturally	New London	A stronger hometown for the Academy and the Coast Guard

Table 1.1

Source: White Oak Associates, Inc.

Conceptual Framework
National Coast Guard Museum

2008 Master Plan

"To build awareness of the United States Coast Guard and engagement with its programs by exploring the Coast Guard's rich history, current life and future potentials through public exhibits, theaters, programs and other museum-quality learning experiences."

- Build awareness of the United States Coast Guard
- Tell the story
- Build engagement
- Provide public education and other services
- Promote Team Coast Guard (Enlistment)
- Support the Coast Guard Academy
- Build public support for Coast Guard programs
- Build public relationships
- Facilitate maritime history
- Economic benefits to New London and the region

- Popular and visitor focused
- Run on sound economics
- A community collaborator
- Based on scholarship and collections
- A public learning resource
- An international institution
- Value driven
- An institution built for change
- A learning organization

2014 Addendum
Mission

"To build awareness and appreciation of the United States Coast Guard and engagement with its programs by exploring the Coast Guard's rich history, current life and future potentials through interactive public, exhibits, partnerships, ~~theaters~~, programs and other museum-quality learning experiences."

Intentional Purposes

- Build awareness and appreciation of the USCG
- Tell the story
- Build engagement
- Provide public education and other services
- Promote interest in joining the Coast Guard
- Support the Coast Guard Academy
- Build public support for Coast Guard programs
- Build public relationships and partnerships
- Facilitate maritime history
- Economic benefits to New London and the region

Guiding Principles

- Popular and visitor focused
- Run on sound economics
- A community ~~collaborator~~ partner
- Based on scholarship and collections
- A public learning resource
- An international institution
- Value driven
- An institution built for flexibility
- A learning organization

2017 Addendum

"To build awareness and appreciation of the United States Coast Guard and engagement with its programs by exploring the Coast Guard's rich history, current life and future potentials through interactive public exhibits, theaters, programs, partnerships and other museum-quality learning experiences.."

- Build awareness and appreciation of the USCG
- Provide an excellent Visitor Experience that tells the story
- Build engagement
- Provide public education, particularly STEM
- Promote interest in joining the Coast Guard
- Strengthen Coast Guard Family Ties
- Build public support for Coast Guard programs
- Support the Coast Guard Academy
- Build public relationships and partnerships
- Economic benefits to New London and the region

- Popular and visitor focused
- Run on sound economics
- A community partner
- Based on scholarship and collections
- A public learning resource
- An international institution
- Value driven
- An institution built for flexibility
- A learning organization

Table 1.2

Source: National Coast Guard Museum Master Plan, White Oak Associates, Inc.

Museum Components

National Coast Guard Museum

Addendum 2017 to Chapter 6

This chapter describes the shared assumptions underlying the operating economic model related to what components and activities the Museum will offer the public.

Planning and decisions have advanced far enough in this chapter that it is more useful to document all the currently listed components than to focus on just the new ones. The Coast Guard and the Association have agreed that the building will include some of the Functional Requirements listed in this chapter and in Chapter 20 “Architectural Program.” The priorities are under discussion as the building size is changing as the design evolves. This model is based on a 68,325 SF Museum building.

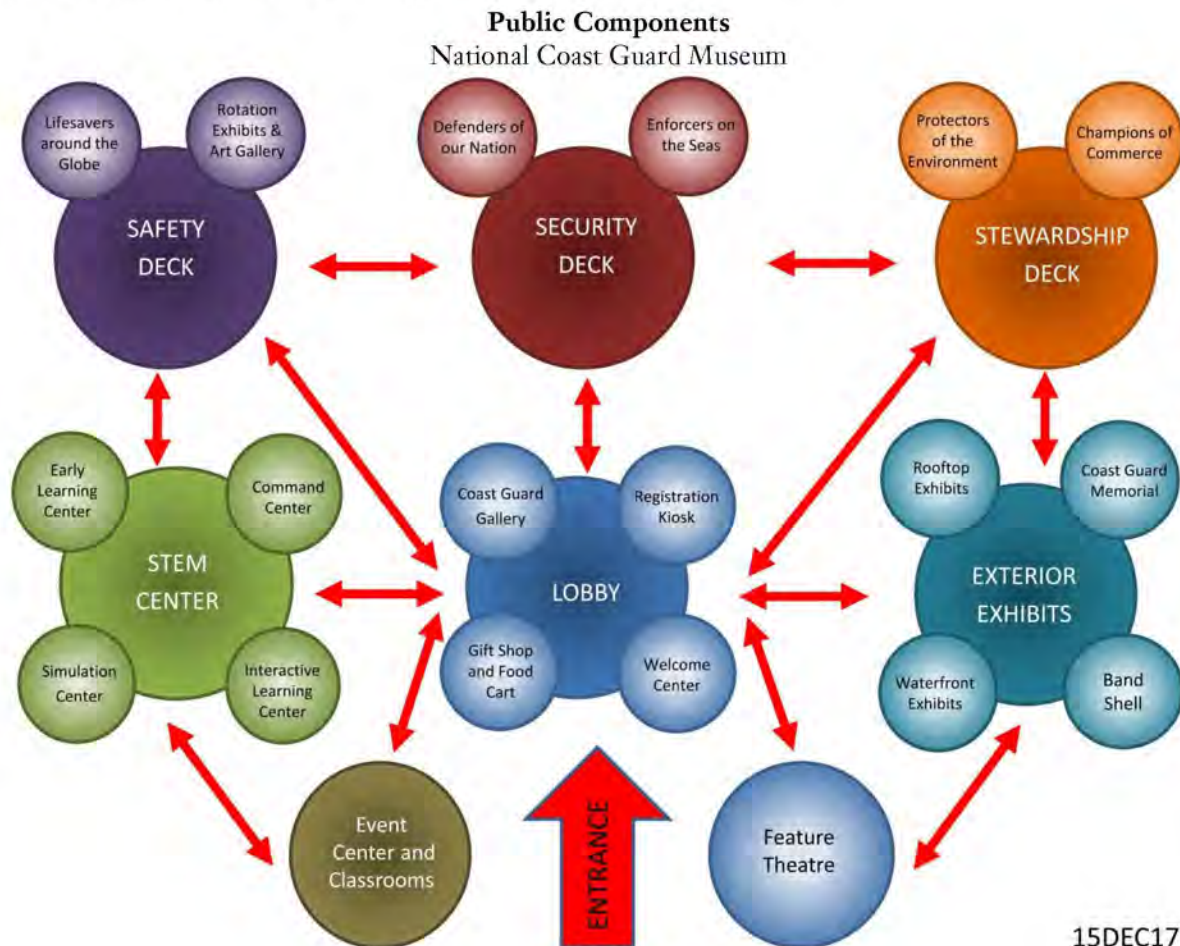


Table 6.1

Source: National Coast Guard Museum Association

Changes Since 2008/2013 Affecting Components

- Larger building -- more GSF.
- Total Gross SF increased
- Total Net increased
- New building layout: Schematic Design underway
- The new site and current program offer more for repeat visits by locals
- Expand concept to a heritage and interactive discovery center
- *Preliminary Master Interpretive Plan* (May, 2017) by the Museum Exhibit Advisory Panel (MEAP) completed. Identifies thematic wings and galleries. Text from this document is included in this chapter.
- Museum Education Initiative (MEI) *Preliminary Phase I Report* complete: STEM Group (School) Program; Qualifications Program and Virtual Shipmate.
- Role of collections clearer: the Museum is not the steward to the collection, but the recipient of long-term placement of objects in the Coast Guard's Heritage Asset Collection.
- Nautilus has a pier with tents. Lots of summer uses. May not charge.
- Outdoor programs need rental agreement with the city. Potential for a cutter in addition to the *Eagle*, and overnight programs on the visiting boats.
- Black box theater missing in New London. Complaint by local artists. 150-seat theater needed here.

The Museum's Components

The components are listed below. Many components are not yet explicit in Payette's plans, but are assumed to fit within that design's broad categories. See Chapter 20 for the Architectural Program recommending sizes for these components.

Drop-off Zone

Outdoor Park (by City)

Exterior Exhibits

Piers and Wharves [by City]

The Visitor Experience Zone (Free Access)

Entrance Lobby

Welcome Center

Visitor Amenities

Registration Kiosk

Coast Guard Gallery

The Gift Shop and Food Service

The Feature Theater

Museum Galleries (3 Decks and 6 Wings)

Margin of Excellence Zone (Scheduled Access)

STEM Learning Center

Early Learning Center

Event Center and Waterview Terrace

Digital Web Programs

Support Facilities (Administration, Workrooms, etc.)

On-site Support

Off-site Support (Walkable Downtown Space)

Visitor Experience Zone

The Visitor Experience Zone is a collection of public spaces that together comprise the core *visitor experience* (see Chapter 7). The zone includes the entrance lobby, the theater and all the galleries. These spaces are open freely to the public during all opening hours.

The Visitor Experience Zone is distinct from the Margin of Excellence and Support Zones, which have different access parameters (see below). See Chapter 20 “Architecture” for zone assignments.

Developing the visitor experience is so central to the success of the Museum that Chapter 7 has been devoted to it. That chapter deals with the exhibits, artifacts, lighting, media and human presence that will become what the visitor will experience while moving through the spaces listed in this section.

Entrance Lobby

The Entrance Lobby should include the following:

- Main Entrance
 - Security Station and Sequence (may also need to be at Loading Dock and/or Level 2 After-hours Bridge Entrance)
 - Welcome Center
 - Ticket Counter at night
 - Registration Kiosk: Membership, Qualifications and Donation Kiosk
 - Coast Guard Icon(s) (Overhead/on walls)
 - Visitor Amenities – public washrooms; family room
 - Stowage Lockers
 - Stroller/Wheel chair storage and exchange
 - Coast Guard Overview Kiosk
 - Group Reception Area & STEM Learning Center Access
 - Feature Theater Lobby and Entrance
 - The Gift Shop & Food Service
 - Administration and HR Reception
 - Access to the Event Center
-

Feature Theater

The emotional story of the Coast Guard is told using powerful media technologies, a dramatic wide screen and comfortable seats. On a wide, high-definition screen, 150 patrons will experience a wide screen film with a dramatic portrayal of the dedication, service, power and honor of the Coast Guard.

The Feature Theater will be a separately accessed venue with this signature film. The signature film presentations will comprise the bulk of its programming, but it will also be possible to use the Feature Theater for other film uses and alternative presentations on a scheduled basis.

During regular public hours, the signature film in the Feature Theater is free. Off-schedule, it can be separately ticketed when it is operated by the Association.

In order to make the experience unique to the Museum and more powerful as a communicator than a conventional movie, the selection of equipment and format should be done with an eye to creating a unique viewer experience. A theater study should recommend format and programming.

It is likely that many public functions will be held at the Museum. Therefore, a conventional auditorium is also needed that will serve multiple purposes. In "auditorium mode," it can be used for film presentations, lectures, and traditional panels and meetings. With a full slate of media at the disposal of its users, the space might attract special presentations during conventions, conferences and graduations.

Seating and Stage Area

The 150 seats will be comfortable and placed in a gentle arc facing the screen with enough room between rows to create a high-quality experience for the patrons. As the space will also be used for award ceremonies and other function rentals, this comfort and image will be important to accommodate and attract a wide range of corporate, military and other rentals.

NCGM would like great flexibility in the potential use of the space in "front" of the first row of seating. Much of the time this zone must be an inconspicuous and neutral space separating the activity on the screen from the audience area; like all theater architecture, it should simply vanish from mind and view when the lights go down. At other times, however, the area will transform itself into a stage capable of hosting a lecturer, a panel of speakers debating public policy, or even a mid-sized musical group.

See also comments on the Theater in Chapter 20, "Architectural Program."

Museum Galleries

The narrative story of the Coast Guard will be told by the Museum Galleries, which include three *decks* with six *wings* on the three floors between the entrance lobby level and the rooftop Event Center. The three gallery decks are organized by the three core mission groupings: Safety; Security and Stewardship. Within these decks, five *wings* organize the missions into storylines, and within the wings, *galleries* highlight the Coast Guard's most prominent stories using large, medium and small *exhibits*.

Using an interpretive thematic approach, major exhibits will be organized by roles and missions within five major wings and a flexible gallery: (1) Lifesavers around the Globe, (2) Champions of Commerce, (3) Protectors of the Environment, (4) Enforcers on the Seas, (5) Defenders of our Nation, and (6) Rotation Exhibits and Art Gallery. Clearly defined wings will be included in the architect's museum design, one for each of the six major areas. Within each of these major themes, the creative design team (working with advisory input from the MEAP) developed early concepts for potential galleries, stories, artifacts and experiences. These are described in much greater detail in the *Preliminary Master Interpretive Plan*.

Changing Exhibit Gallery

The Rotation Exhibits and Art Gallery is a 1,500 SF changeable gallery, perhaps more intimate and more contemplative than the other galleries. The Art Gallery features changing installations from the Coast Guard's substantial collection of paintings, sculptures, and other artwork. The changing exhibits are likely to be thematic, with diversity from show to show; a war action

painting show, for instance might be followed by an installation of top-quality portraiture from the collection.

In the future, the Museum might develop, launch and tour a Coast Guard national traveling exhibition, but it would have to be free to the public.

This space, capable of serving as one of the Museum's temporary exhibit galleries, can also be used as a rollover or flex space while another gallery is being fitted-out or as a function rental space between programs.

Margin of Excellence Zone

Spaces designated to generate revenues in support of the Museum's extra efforts are in the Margin of Excellence Zone. These components are not contiguous, but strategically located around the Museum where they are operationally effective and efficient.

These spaces include the Registration Kiosk; the Museum Shop and Food Service; the Event Center; and the STEM Learning Center with its Early Learning Center.

The Event Center and the STEM Learning Center will be jointly managed after opening, with responsibility shifting at agreed upon times. Before opening, the Association will be responsible for constructing the spaces and the Coast Guard or others for outfitting, equipping and furnishing these spaces.

The Margin of Excellence Zone is physically distinct from the free Visitor Experience Zone, and access can be controlled during public hours. The Association can charge for extra value programs or for private use of these spaces within its time allotments.

Registration Kiosk

The Association's Registration Kiosk for memberships, qualifications and donations contains an information and sales counter. Located downstream in the entering visitor traffic flow from the Welcome Center, but before the elevators and stairs.

This service desk distributes Qualification Chip Cards that enable visitors to activate game-like sequences in designated exhibits in the galleries and to accumulate points. Enough points earn a qualification certificate and a time slot on one of the simulators in the STEM Learning Center.

The service desk also sells memberships, with benefits to residents for evening and winter programs and to young families, with members-only access to the Early Learning Center.

The Museum Shop and Food Service

The Museum Shop and Food Service, two separate facilities in earlier plans, have been combined because the waterfront café envisioned in 2014 is not code compliant, and the Museum's traffic alone is not great enough to sustain a café.

Food service will be handled by the Museum Shop operator and will be limited to the equivalent of a food cart. There are other food service options nearby.

Event Center

The Event Center will occupy half the top floor of the Museum, with an outdoor terrace on the other half with a glorious view. The 3,500 SF indoor space (including additional catering and

other support facilities) is capable of hosting dinner events, weddings, conferences, school groups and even traveling exhibitions.

There are many other event rental spaces nearby (including Stonington, Mystic, Groton and New London), some also with water views. The Event Center needs to find its unique niche within this competitive market. A separate study by the CT Tourism Office and the local chambers reviewed local event spaces and found a shortage of wedding venues, for instance. If this study is specific about what size venue with what features will attract what revenue, the Museum might be able to adapt it; if not, the Association should commission a feasibility assessment and resulting positioning and space/infrastructure recommendation from a museum food service analyst and/or museum event planner as part of the Association's next steps.

- Make the Event Center both Coast Guard celebratory and outfitted with event infrastructure.
- Consider visible collection storage along the walls.
- Add an event and food service planner to the A & E team to help with direction on how to outfit these spaces.
- Make sure the Event Center has outlets and other exhibit and lighting needs for traveling or temporary exhibitions.
- Rooms need to accommodate preparation for brides and grooms.
- Consideration also needs to be given in regard to storing tables and chairs used for function rentals.

The Event Center will also serve as the Museum's Group Hub during school days and summer camps. Groups will assemble in the Hub for orientation, lunch, summation and other parts of their group programs.

STEM Learning Center

By including a STEM-focused approach to the overall visitor experience, the National Coast Guard Museum will leverage K-12 programming, expert speakers, virtual shipmates, operational platforms, engaging museum exhibits, modern exploration laboratories, and interactive experiences and simulations to support three primary goals with STEM:

- Create an enjoyable and stimulating learning environment that promotes social interaction and heightens student interest, curiosity, and confidence in continued STEM learning.
- Develop a continuum of learning experiences that increase in complexity and provide opportunities for students to improve knowledge and understanding of concepts.
- Inspire increased understanding and interest in careers, to include potential careers in the maritime, aeronautics, and in the United States Coast Guard.

Throughout the entire STEM Learning Center, key experiences will be enhanced with hands-on Coast Guard opportunities to include communications, optics and lighting, engineering, seamanship, damage control, marine science (fisheries), marine science (environmental), and navigation. An example is an interactive marine science (fisheries) experience which not only explains the need for regulations, but permits the visitors to determine proper catch by using Coast Guard procedures and equipment.

The Learning Center will be accessible from the public entrances as well as connected to the Museum Galleries. This allows school groups and others to arrive at NCGM, enter through the Learning Center, receive broad orientation in the Command, an open area, proceed through the

exhibit experience, and possibly return to the Learning Center's program spaces for lunch in the Command and/or more in-depth programs in the labs before re-assembling for departure.

Some of the following spaces may be incorporated into the STEM Center:

- 1 An **Interactive Learning Center** within the STEM Center will entertain and inspire school groups, team challenges, CAMP-ins, K-12 programming, special needs visitors, and homeschoolers. The Center will develop interactive classroom sessions that invoke exciting Coast Guard stories and connect to real world application of STEM concepts.
- 2 **Exploration Laboratories** within the STEM Center will host student groups for instructor led programs. Combining lectures, demonstrations, and story-telling with hands-on student exploration is a proven method to reinforce the subject material. **Discovery Stations** will also be integrated throughout the museum to extend STEM learning to the major exhibit spaces (wings and galleries) and to offer individual and small group self-inquiry and discovery.
- 3 A **Simulation and Gaming Center** will enable visitors to experience real world Coast Guard operations simulated in an aircraft cockpit, a ship's bridge, or a boat coxswain steering station. The simulators will be designed to be networked to offer a variety of challenges with variable degrees of difficulty for individual and small group play.
- 4 Within the STEM Center, a **Rescue Coordination Center** will be designed to simulate a modern-day or future Coast Guard Rescue Coordination Center. Teams of students will be challenged to work together to coordinate a response to typical Coast Guard cases such as a major rescue at sea, a marine pollution incident, or a maritime law enforcement response. A group breakout space located adjacent to the Rescue Coordination Center will allow pre and post exercise briefing to enhance the overall learning experience.

The actual choices operating modes and for equipment capabilities will be determined based on assessing the needs of teachers, scout groups, summer camps, adult education programs, and the function rental market including area corporations.

Early Learning Center

More attention is going to preschool education as research on brain development helps parents understand how much learning is going on before their children get to school. Many museums now include areas and programs for preschoolers and their parents. These areas combine exhibits, programs and discovery centers to develop children's learning skills as well as their parents' parenting skills.

The Early Learning Center will engage children in STEM learning at an early age. All exhibits will stimulate constructivist learning through multiple learning styles. Exhibits with Coast Guard themes and characters will provide a suite of learning opportunities by providing experiences that will encourage full-bodied play (sometimes encouraging a feeling of "safe danger"), provide hands-on experiences for direct learning, foster role play, create emotional connections, provide context for content, encourage social, family-based learning, provide real objects and themed environments, and mix changeable elements with the familiar and safe.

A toddlers' area is tucked away in a quiet, safe nook. Entrance is permitted only to those under a certain height and with their caregiver. Here, the youngest visitors can play safely in a soft environment.

Digital and Virtual Museum Engagements

The change is to increase the Museum's virtual and outreach engagements over the 2008 *Plan*, develop a forward-looking plan for the Museum's online activities and digital programs and assets, and the Museum should support the *Plan* with investments in equipment, infrastructure, space and personnel.

- Follow museum best practices with regard to social media participation
- Consider some national, NCGM-branded program, such as building the skills and self-confidence of at-risk teens with waterfront after-school workshops.
- Partner with regional schools and Project Oceanology, a secondary school on water programs at UConn - Avery Point Groton campus.
- Connect NCGM with heritage museums across US via interactive video.

Parking

Parking does not come with the proposed site, and visitors and staff arriving by car must find parking in the nearby parking structure connected by bridge to the Museum or in other downtown lots.

Potential parking issues and impacts are one of the subjects of a NEPA environmental study. Mr. Carey Redd, Director, New London Parking Authority, is confident that there will be enough parking to meet expected demand, including the Museum.

Support Facilities

Behind-the-scenes operating support facilities will be needed to run the Museum efficiently. These will be programmed in broad categories:

- 1 Maintenance shops and other workrooms
- 2 Clean workrooms for collections and electronics
- 3 Storage
- 4 Janitorial maintenance and operations areas
- 5 Required administrative spaces and other clean support facilities

It is clear that all the needed support functions will not fit within the architectural envelope, and some will need to be moved off-site to leased space.

Outdoors and the USCGC *Eagle*

The City controls most of the outdoor space used for dock-based activities like the *Eagle*, water-taxis, rowboats, pleasure craft, riverboat cruises, waterfront festivals, dinner cruises, lighthouse tours and civic gatherings.

The *Eagle* and other Coast Guard Vessels

The USCGC *Eagle* is a prominent icon for the Coast Guard, and information about its whereabouts, and possibly a web cam, will keep visitors informed about where it is at that

moment. It would be ideal if the *Eagle* could be moored in New London for at least several weeks during the peak summer season as well as at this regular berth the rest of the year.

The *Eagle* is important to the Museum symbolically. It is important that the official home port is beside the Museum and that when she is in port, that she be proudly visible, celebrated and accessible to the public. If the official home berth of the *Eagle* were to move elsewhere, the stature and potential impact of the Museum would be reduced.

However, the USCGC *Eagle* is not part of the Museum organizationally and has its own scheduling, budgeting and management. The *Eagle* is neither in the Museum's budgets nor among its components. While the Museum will run better when the *Eagle* is in port, it is not necessary for core operations, as budgeted elsewhere in this document. Hence, the site as the home berth of the USCGC *Eagle* is symbolically critical, but operationally, the presence of the actual vessel it is supportive but not critical to the Museum's operation as long as she is in her home berth some of each year.

- The Association will explore whether admission can be charged for privately-owned ship tours (e.g., the Charles W. Morgan) as a net profit center, like a traveling exhibition.

Operating Modes

Given the wide range of traffic flow (crowded on summer weekends; empty during winter weekdays), there may be areas that can be closed off. The winter building will be operationally different from the summer building.

The following spaces should be designed to operate in different modes at different times of the day and seasons. Operating modes might include: public hours; off-hours; school; winter; summer; spring; fall; and closed.

- Event Center
- Feature Theater
- STEM Learning Center
- Lobby
- Early Learning Center

Audience Seasonality
National Coast Guard Museum

Season	Prime Audience
Summer	Tourists
Fall	Reunions & Tourists
Winter	Residents
Spring	Schools

Table 6.2

Source: White Oak Associates, Inc.

Development of a Visitor Experience

National Coast Guard Museum

Addendum 2017 to Chapter 7

This chapter focuses on the *visitor experience*, the main Museum component listed in the previous chapter. The Lobby, Feature Theater and Museum Galleries outlined in this chapter are collectively the Visitor Experience Zone. The Visitor Experience is operated by the Coast Guard and is free to the general public. Separately, but in support of the Visitor Experience, the Margin of Excellence spaces are run in partnership with the Association, sometimes on a fee basis to the public.



Exhibit Concepts and Objectives

The Visitor Experience has the following goals:

- 1 Serve the Museum's mission and objectives.
- 2 Interpret the collections emphasizing:
 - a Rich and varied history of the Coast Guard's development
 - b Scientific principles behind the object/artifact
 - c Interrelationship of social issues and the role of the Coast Guard
 - d The people stories associated with the object
 - e The relevance of the above to today's issues and audiences
- 3 Establish a world class museum facility, waterfront, and exhibition space that will attract international attention, strengthen the Nation's maritime museum system, and become the Coast Guard's hallmark attraction for national and international visitors.

- 4 Attract the general public by telling compelling stories from the Coast Guard's past and present.
- 5 Convey the important missions performed by the Coast Guard as well as the service's significant national and global impact.
- 6 Inspire visitors to appreciate the national service and values of Coast Guard men and women, and follow in the footsteps of the many in our service, both past and present.
- 7 Showcase the service as a leader of maritime science, technology, and research; and engage visitors on the importance of STEM in executing CG missions.
- 8 Provide interactive experiences that expose visitors to the complexity of accomplishing Coast Guard duties.
- 9 Excite visitors regarding the Coast Guard's expanding role in our Nation's future.
- 10 Elicit the following emotional responses in visitors:
 - a. Honor and respect for the Coast Guard profession
 - b. Admiration for the wide expanse of Coast Guard roles
 - c. Sense of new found knowledge from the exhibits
 - d. Excitement to recommend the Museum
- 11 Maintain and communicate the Coast Guard's image.
- 12 Reflect the variety of learning styles which exist in a broad audience.

Visitor Key Take-away Messages

- 1 From the founding of our Country, the Coast Guard has played a critical role in the nation's defense, the growth of the United States as a maritime nation, and its significance as a global leader in commerce.
- 2 The Coast Guard is comprised of predecessor services that have shaped the culture and values instilled today.
- 3 Coast Guard men and women are on watch all over the world and the nation is safer and more secure as a result.
- 4 Coast Guard men and women are Lifesavers around the Globe, Champions of Commerce, Stewards of the Environment, Enforcers on the Seas, and Defenders of our Nation.
- 5 The Coast Guard is unique as compared to other services and agencies.
- 6 With its many missions, the Coast Guard has been and continues to be interconnected with our daily lives.
- 7 Past, Present, and Future: The Coast Guard exemplifies their motto, *Semper Paratus*, by always being ready to respond to our Nation's needs.

An Integrated, Artifact-based, Changing Visitor Experience

In order to achieve the most successful Museum, the design scope for the *visitor experience* (also known as the exhibits) should follow these principles:

- The National Coast Guard Museum's visitor experience will be designed and developed under the direction and supervision of the Coast Guard Historian's Office.
- Public access to the visitor experience will be free during all public hours.
- The visitor experience will be self-sufficient and able to stand on its own, technically, artistically and educationally.
 - *Programs*, defined below, can be layered on top of the visitor experience as extra value, but are not necessary to the free visitor experience.
- The visitor experience will be most effective and efficient at achieving the Coast Guard's and the Museum's objectives if it is conceived and designed as an integrated experience for the visitors facilitated by a strategically allocated budget responsible for the whole visitor experience.
- The concept through design intent phases should be contracted to one team of experienced visitor experience designers.
- The visitor experience will be designed to change both in content and experience, unlike permanent exhibits. All of its parts are temporary ("moveable and re-movable") in placement, setting and/or use.
 - The visitor experience should be designed to change across the time scale. Examples of change might include:
 - Live programs, such as the School Group Program, will change hourly, as demonstrators customize their script choices to each audience.
 - Publically accessible databases will be updated regularly.
 - Programs in the Event Center will change on a booking schedule.
 - The Signature Film will be produced by the Coast Guard and will be free during public hours. During non-public time slots, Films in the Feature Theater will change by a seasonal schedule.
 - The Qualification Program will add new levels or certificates each year, archiving older ones.
 - New Virtual Shipmates will be introduced yearly at the same time new major league draft picks are announced.
 - Labels and graphics will be updated as needed.
 - Galleries will periodically move and re-sequence exhibit units and re-hang the lighting design.
 - New exhibits will replace old, less effective exhibits, resulting in an evolving visitor experience.
- The entire visitor experience will be artifact-based, following on the language of the 2007 Museum Services Act: [A museum is] "a public or private nonprofit agency or institution organized on a permanent basis for essentially educational or aesthetic purposes, which, utilizing a professional staff, owns or utilizes tangible objects [also known as artifacts], cares for them, and exhibits them to the public on a regular basis." (Public Law 111-340, 2010).

- All exhibits and media will relate to artifacts and their interpretation.
- The federal Institute of Museum and Library Services (IMLS) interprets this language broadly enough to include science and children's museums.
- *Artifacts*, generically called *objects* in the museum field and *heritage assets* in the Coast Guard are defined to include at least:
 - Objects in the Coast Guard collections.
 - Equipment, materials, documents, models and other physical objects used by or in use by the Coast Guard or its suppliers and partners. Doug Munro's Medal of Honor is an artifact.
 - Digital objects such as news feeds from Coast Guard and related sources, digital images and media, and recordings of significant events or of Coast Guard personnel and their supporters. An oral history is an artifact, so is a photograph.
 - Natural phenomena related to Coast Guard activities, such as a wave generator, light passing through a Fresnel lens, and a wind simulator.
 - The Coast Guard Historian's Office may amend or add to this list.
- The Museum will store and display artifacts entrusted to its care in the following conservation levels:
 - A Level Artifacts will be housed in collection-quality standards as set by the American Institute of Conservators (AIC) or a similar organization, as selected by the Coast Guard Historian's Office.
 - B Level Artifacts will be housed indoors in normal office-like temperature, daylight, humidity and security specifications.
 - C Level Artifacts and/or artifact reproductions will be installed outdoors, exposed to the elements and open to public access.
 - D Level Artifacts will be warehoused in sheltered but not climate-controlled space with no public access, such as Forestville.
 - E Level Artifacts are disposable educational artifacts.
 - The spaces that meet Levels A – C will be indicated by color code in Payette's floor plans in Attachment C, or subsequent revisions.
 - The Coast Guard Historian's Office may amend or add to this list.
- The territory of the visitor experience is indicated by code ("VE") in the Architectural Program in Chapter 20. The *wings* will be subdivided into *galleries* and *hubs* by the Visitor Experience designer. Collectively, these spaces are the Visitor Experience Zone:

Visitor Experience Zone: SF
National Coast Guard Museum

	NSF
Public Lobby Spaces	2,410
Theater	2,800
Museum Galleries	23,925
Changing Gallery	1,500
Public Circulation	8,475
Total VE Zone	39,110

Table 7.1

Source: White Oak Associates (Architectural Program v 6.3)

- Budgets for the Museum's Visitor Experience average \$513 to \$656/square foot which is within industry norms. This budget is inclusive of all design fees, fabrication, and installation, but not of the Museum staff salaries and related expenses. This figure collects all the footnoted budget amounts into one total (\$20,082,156) and divides by the total SF of the Visitor Experience Zone (39,110 NSF including circulation or 30,635 NSF without).
- Three large capital scopes have adjoining boundaries, so that edges need to be defined to clarify who does what and who is paying: The building, the visitor experience and the programs. The building will include all building spaces and their built-in finishes, cabinetry and infrastructure. The visitor experience will include such elements as exhibits, environments, graphics, media, lighting, wiring, data feeds, furnishings, etc. The programs will include all scheduled activities that may use the building or the visitor experience. School group tours, lectures, volunteer shifts, audio tours and private events are all programs. Some programs may be charged for.
 - The Coast Guard is responsible for the visitor experience and the free programs.
 - The NCGMA is responsible for building the building and for operating the Margin of Excellence programs.

Key Concepts

The following concepts will guide the development and implementation of the visitor experience as well as the institution's programs.

- **STEM Integration:** Mr. Rob Malootian, senior designer at Gallagher & Associates said "Throughout the galleries, exhibits will include STEM components to both enhance the museum experience and draw visitors to a high tech and interactive STEM Learning Center. While the major gallery exhibits will showcase Coast Guard stories and artifacts, the STEM Learning Center will focus on the experiences that Coast Guard men and women have every day. All of this is designed to spur young visitors to become tomorrow's critical thinkers, problem solvers, innovators, and perhaps future Coast Guard service members."
- **Varied Learning Styles:** The experience will blend a number of different kinds of learning spaces, some of which will be traditional history showcases that tell stories, while others will be like art galleries or more informal hands-on arenas with clusters of exhibits whose elements can engage the whole family, from toddler to senior.

- **Compelling Images and Artifacts** that bear the marks of time, and of the characters from the past who used them. They transport each of us, for a moment, into someone else's time and place, and spark an interest in knowing more.
- **Hands-on Interactives:** Participation and active engagement promote learning and fulfillment for visitors, particularly children. From a pedagogical perspective, hands-on/minds-on exhibits provide complementary learning gateways to classroom learning by offering spatial, kinesthetic, experiential, visual and other intelligences to add reality to textbook principles.
- **Embedded Toddler Activities:** Families with small children need opportunities to let them get physical and have fun.
- **Social Learning:** Most visitors will arrive in social groups, not as individuals. Four or five friends in a school group will explore together, and a family with a span of generations will arrive, as will a couple on a date. Exhibits will be designed for group interaction and as facilitators of conversations.
- **Docents:** Throughout the Visitor Experience facilitators and explainers will add a friendly personal aspect to the visitor's experience. These individuals, who will include some staff but primarily will be volunteer-based, will provide personal connections between individual visitors and exhibits and their contents. This customized human touch will be able to engage the visitor's specific interest and levels of knowledge and go on to inspire a greater understanding of the exhibit and subject in question. (See also Chapter 15).
- **Operatable:** Design the exhibits within the limits of the staffing and volunteer plan.

Evaluation

The Museum will use evaluation techniques as part of the exhibit development process to improve the learning experience in the eyes of the visitor. The process begins with "front-end" or concept evaluation. Within the overall framework of each theme gallery, the planning team will determine from members of the target audiences the level of knowledge and interest in proposed areas and ways of thinking about the subject matter. An important element in this work is also to learn what common misconceptions visitors have about the subject. This information then becomes an important input to the planning of the content itself.

A sequence of design evaluations are conducted, including, where possible, the development of prototypes. "Front-end" evaluation assesses the level of interest visitors might have in the kinds of experiences to be offered. "Formative evaluation" considers the effectiveness of prototypes. "Critical appraisal" examines the exhibits near the end of the development process, and "summative evaluation" looks at the completed project and assesses what, given the complex environment, may have been overlooked or misjudged and in need of correction. Summative evaluation will also look at intent-to-outcome alignment and establish opening benchmarks for the Museum to monitor.

Implementation

Factors Affecting Exhibits Expenses

The style and approach to exhibits is a major factor influencing cost. In general, the following techniques are more expensive than average:

- Electronic or computer-based displays, if original software is required
- Multimedia-based exhibits, if original software is required
- Atmospheric, immersive or environmental displays
- Complex or highly detailed models
- Highly designed exhibits
- Original interactive devices
- Simulators

The following techniques are generally less expensive than average:

- "Off the shelf" exhibits purchased from others
- Discovery rooms and workshops, unless housing major equipment
- Low-design exhibits using inexpensive materials

Special Issues During Startup

A new museum being built from the ground up must allow for certain infrastructure expenses that drive up the expense beyond what an established museum might experience. These expenses which are not normally included in an architect's core budget, have allowances specified in the capital budget:

- Track lighting fixtures: Architect should provide base lighting in the facilities budget and should provide sufficient power for the track, and placement of tracks, but lighting heads are normally a responsibility of exhibit designers.
- Plumbing: Architect should provide stubbed services to designated spaces. Plumbing and connecting individual exhibits is part of a "gray bucket" allowance carried by the Owner.
- Electrical: Architect should provide power to all outlets and in some spaces just to central distribution points. Taking service from those points to individual exhibits should be budgeted by a "gray bucket" allowance carried by the Owner.
- Graphic design and building signage: Architect should provide general building signage, directional, informational, outdoor signage on the building and in the grounds, all of which are not part of a specific thematic exhibit area
- Maintenance and Workroom: Tools, supplies and equipment provided by the Owner.

Practical Considerations Associated with the National Coast Guard Museum

All gallery and public spaces should be provided with the Standard Exhibit Infrastructure that will be expressed to the architect through the *Room Book*, to be developed by the Visitor Experience Team and/or the Museum Planners at a later stage as a way of articulating the Owner's functional specifications for the Museum building to the architect.

Exhibit Evaluation Filters National Coast Guard Museum

Core Values (All Must-Fit)

Relates to the USCG
Tells USCG stories
Content is significant & accurate
Raises engagement with the USCG
High value visitor experience
Establishes visitor confidence
Fits approach designated for that space

Universal access and design
Green thinking
Relevant to visitors and customers
Fits with brand identity
Engaging and appropriate design
Incorporates visitor research
Involves community program partners

Learning Approaches (May Vary with Reason)

Engages and Inspires
Stimulus for conversations and participation
Lifelong learning

Clarity of message and activity
Interdisciplinary (science, technology, art & history)
Intellectually accessible to all

Visitor's Needs (May Vary with Reason)

Responds to participant's learning interests
Appealing subjects
Appealing experience

Relationship to daily life – relevance
Engaging more than once
Community gathering uses

Works for Small Groups (Families, Social Outings) (May Vary with Reason)¹

1. Multi-sided – family can cluster around exhibit
2. Multi-user – interaction allows for several sets of hands (or bodies)
3. Accessible – comfortably used by children and adults
4. Multi-outcome – observation and interaction are sufficiently complex to foster group discussion

5. Multi-modal – appeals to different learning styles and levels of knowledge
6. Readable – text is arranged in easily-understood segments
7. Relevant – provides cognitive links to participants' existing knowledge and experience

Operational Considerations (May Vary with Reason)

Flexibility (Delta change tactics used)
Low operating cost/hassle
Low staffing requirements
Leverages in-kind services or equipment
Environmental sensitivity
Technical elegance
Finishes
Accessible to special needs
Supports sponsor/donor interests
Green fabrication and materials

Cost effective
Craftsmanship quality is high
Storage capacity/low demand
Low noise and environmental impact
Dwell time appropriate to experience
Does it work well?
Fits design style of area
Throughput/capacity
Crowd management
Creates a longer dwell time

Logistics (All Must-Fit)

Schedule/delivery
Budget/cost
Safety

Actual cost lower than perceived value
Code compliance

Table 7.2

Source: White Oak Associates

¹ Family Learning in Museums: The PISEC Perspective, p. 23 (PISEC = Philadelphia-Camden Informal Science Education Collaborative) by Minda Borun, et. al.

Collections Plan

National Coast Guard Museum

Addendum 2017 to Chapter 11

This chapter of the Museum's *Strategic Master Plan* (the *Plan*) describes the shared assumptions underlying the operating economic model related to collections. This addendum addresses only aspects that have changed enough to merit changes to the *Plan*.

Since the *Master Plan* in 2008, the Coast Guard's collection has been unified and branded the Heritage Asset Collection, which exists at multiple locations, but is centrally catalogued and managed by Curatorial Services in the Historian's Office.

Statistics (Source: USCG Curatorial Staff, Sept 2017)

- 17,555 objects cataloged in Past Perfect, the Heritage Asset Collection Database, with 19,420 tracked in Oracle, the Coast Guard Property Database
- Exhibit Center: There are 9,215 cataloged objects representing 14,428 items
- CGA Museum: There are 6,682 cataloged objects
- 1,658 are on loan

Recommended Roles

Several facilities are relevant to the *Master Plan* for the National Coast Guard Museum (NCGM and the "Museum"): the existing Coast Guard Museum (CGM) in Waesche Hall at the Coast Guard Academy (CGA); the Exhibit Center storage facility in Forestville, Maryland, and the future Museum. These facilities will play different roles in different phases: 1) before construction starts on the Museum ("now" and "status quo"); 2) during construction; 3) during the early years of operation; and 4) after stabilization of operations and staffing.

The *Plan* assumes that the visitor experience designers will incorporate objects from the Heritage Asset Collection into the new Museum's exhibits and media (the *selected objects*). All of these will be on location from the Collection assigned to the Museum. Some assignments will be *long-term* for use in long-term exhibits; others will be *multi-year* for use in touring exhibitions; others will be *periodic* for changing installations at the Museum, and others will be *short-term* for filming and media use.

Contemporary exhibit design tends to use a few selected objects surrounded by graphics and media and sometimes scenery. While these few objects will be featured and critically important to the visitor experience, the number of objects on display at one time in the new Museum is likely to be a small fraction of the objects currently in the Exhibit Center and the Coast Guard Museum. The re-locations of the selected objects from either source are not likely to offset normal collection growth.

Collection storage and stewardship are demanding responsibilities, with professional and environmental standards evolving, generally increasing in cost and complexity. Storage conditions for temperature, light, pestilence and humidity are demanding, and curatorial

professionalism increasing. Museum accreditation and professional committees oversee specifications and ethics with regard to collections.

The Museum's architectural program includes spaces suitable for collection display and the staff lists include a collections professional. However, there is no guarantee yet that the Museum will be built as specified or that a Coast Guard curator will be on staff to manage more than the objects selected to be on display.

The Museum is currently not in a position to care for objects, as it has neither suitable space to house them nor fulltime staff on site to care for them. At some point during construction, when Coast Guard staff is on duty to care for the loans and when an exhibit fabricator has suitable preparatory facilities, then the Museum can start to handle the actual objects selected earlier by the designers.

In a similar fashion, the Museum is not in a position to take over stewardship of the whole Heritage Asset Collection, and it may never be the best solution. There is not enough room at the current Coast Guard Museum or in the future Museum for significant collection storage spaces, unless some nearby New London warehouse is acquired or rented. It is premature to entrust the management of the Coast Guard's collections to the Museum (except for loaned objects) until it is both professionally and spatially ready to take on stewardship of some or all of the collection at some nearby but offsite location, aside from those collection objects installed in exhibits and public displays. This means that the current separate management funding for the Coast Guard's collections should continue until years after the Museum has opened. Well after opening (c 2026), a study should be conducted of the possible reorganization of the Collection's storage and care.

The stewardship of the whole Heritage Asset Collection by the Museum is not contemplated by this *Plan*, except for those selected objects it has borrowed.

Heritage Asset Collection and Facility Roles
National Coast Guard Museum

		CG Museum	Exhibit Center	NCGM
1	Before Construction	Status quo	Status quo	--
2	During Construction	Redesign to focus on CGA needs Separate objects selected for the NCGM	Prepare objects selected for the NCGM	Incorporate selected objects into exhibits
3	Early Years of Operation	Focus on CGA needs	Status quo	Exhibit selected objects
4	After Stabilization	Focus on CGA needs	Status quo Study central storage relocation	Exhibit selected objects Study central storage relocation

Table 11.1

Source: White Oak Associates

Changes Relative to Collections Plan

- Deleted: Collections Storage (2,525 SF)

- Role of collections clearer: the Museum is not the steward to the collection, but the recipient of long-term location assignments of collection objects.

The Role of Collections

When asked ‘why use a museum to tell the story of the Coast Guard?’ Dr. Browning, the Coast Guard’s Historian in 2008, emphasized the “use of historical artifacts to tell the story” and the “power of objects to communicate,” and so the collections will play a central role in helping the Museum achieve its objectives. Real objects, particularly those that show the mark of use and of history, can connect us emotionally to the past and provide an authentic link to important stories. Some of the objects currently in the Coast Guard’s collections that have story telling power include:

- The Katrina Axe (signed) that they used to chop through the roof of a house in New Orleans.
- Rescue boats – life-saving service, with several from different time periods. They show how people’s lives were saved and the changes over time
 - Life cars – made of metal
 - The original 1872 life boat and the last 36 footer in service and the next one, a 44 footer
 - 1888 life boat
- A traveling library of books that used to go from lighthouse to lighthouse for light keepers to read.
- Buoys and bells could go outside.

Apart from items that are rotated and changed along with exhibitions, there are some objects that fall into the icon category, which should remain in the Museum on long-term placement. These will be objects that visitors will come to the Museum specifically to see. The Katrina Axe should be treated as such, commanding a prominent place in the Galleries. Additionally, while there is no one Fresnel lens that is iconic, all of them collectively are important and popular. A quality selection of these in every single order should also be on display.

These are, however, only a few of the objects in the Coast Guard’s extended collections, and many more stories can be found in the uniforms, weapons, equipment and other historical objects located in storage and dispersed on loan to over 250 loan organizations internationally and to many Coast Guard facilities. Additionally, there is an extensive collection of Coast Guard art.

High Quality Collection Care

Separate from the Museum project, although clearly related to it, the Coast Guard needs to take care of its valuable collections by ensuring a stable environment with Smithsonian-quality collections standards. Anything less will be putting national heirlooms, treasures and scholarly resources on a path of irreversible deterioration.

Market and Attendance Update

National Coast Guard Museum

*Addendum 2017 update of
Chapters 12 (Market Assessment) and Chapter 14 (Attendance Potential Estimate)*

Also see Attachment E for additional data used to inform the market update.

This chapter updates the analysis of the New London marketplace in regard to the Museum, including the population size of each, previously defined, market segment from which the Museum will draw attendance, and updates the attendance potential estimate, based on both the market update and the changes since the 2008 *Plan* and *Addendum 2014*.

City of New London Update

In *Addendum 2014* it was noted that many city improvements, building development and renovations had occurred in New London, all improving the New London market vis a vis a new Museum. That continues to be the case.

Opportunities

- Continued redevelopment of downtown with new office space, residential units and some lodging.
- Development of new apartments at market rates, first market rates in decades.
- Retail vacancy rates are down and some vacancies are because recently purchased buildings are being renovated. There are currently talks of whole blocks being developed in the Ft. Trumbull area.
- There is new interest in living downtown from a younger and educated.
- The renovated Guarde Theater is an active and important part of the cultural community. It is a 1200 seat theater with a variety of presentations including foreign films and live acts such as Melissa Etheridge and Boz Scaggs, with sold-out concerts.
- Electric Boat hired 840 engineers. If they get a contract for a fourth vessel they could add another 1100 jobs, although there appears to be discussion now of adding new jobs in Rhode Island.
- The City of New London is pro-actively addressing parking and traffic issues and plans to add 400 spaces to the Water Street Garage across the railroad tracks from the Museum. A pedestrian bridge will connect the garage and the Museum and Ferry Terminal.
- The population of New London is increasing. It is anticipated that 5,000 people will be added to the population over the next 36 months.
- Boat taxis from New London have been implemented and are expanding their route in 2018 to reach the Submarine Force Museum and Nautilus. This will create a nice synergy with the Museum once it is open.

- Ridership has increased and is expected to increase in many modes of transportation – the ferries, trains and buses. In *Addendum 2014*, Cross Sound Ferry served over one million passengers. The number of passengers has increased significantly since then. Current numbers are about 1.4 million and a new ferry terminal was added. Their plans still include building another passenger terminal adjacent to the Museum, adding another ferry and increasing current ferry service. Ferry service has also increased for the Fisher Island Ferry. Current estimates, based on both service by the Cross Sound Ferry and Fisher's Island Ferry are that passengers could reach over 1.7 million annually by 2025.

Small increases in ridership are projected for rail and bus. Shoreline East between New Haven and New London serves approximately 55,000 riders per month, both commuters and leisure travelers. ¹ In FY 2017 there were 161,916 boardings and alightings.

- It is expected that signage for the Museum will be on I-95.
- Violent crime rates in New London decreased and in 2015 were at their lowest since 2008, including assaults, burglaries, thefts and auto thefts. The 2016 index rose to 321, still much lower than in the past. The city still has higher rates than in other area communities, but less than the average US index.
- Although in prior reports it was mentioned that gamblers tend not to be museumgoers, one of the casinos does organize group tours to area attractions. Many people going to the casinos arrive by ferry and a casino bus picks them up and drops them off near the ferries in New London, certainly an opportunity for the Museum.

Potential Challenges/Risks

- If the City of New London does not implement all the transportation and parking recommendations, especially adding parking spaces, outlined in the Milone & MacBroom February 2017 *New London Downtown Transportation and Parking Study*, parking for Museum visitors will be an issue. Even if parking spaces are added, there may still be issues on peak summer weekends, but with the planned addition of new parking spaces the issue may be more of where to park (closer or farther away) rather than if there are spaces to park in.

The city has stated it is committed to adding 400 spaces to the Water Street Garage, but they have not yet raised the \$13-\$15 million needed for the project.

- The crime index per 100,000 persons biggest increase in violent crime was in murders per 100,000 persons, rising from 3.9 in 2008 to 14.6 in 2015. Crime, and the perception of crime, is more of a negative factor in the evenings than during the daytime. In the summer there are so many people using the ferry terminals and participating in waterfront activities, the perception of crime is not an issue. The perception of crime could impact evening function rentals and special events. The Museum will need to make sure that access to the Museum is safe and is perceived as safe.
- A January 2018 article in *The Day* indicated that Pfizer plans to cut about 100 jobs from its Groton site.
- Cruise ships stopped coming to New London. In 2007 the total was 11,000.

¹ <https://ctrides.com/ways-to-commute/train>, Accessed April 14, 2018

Parking

The City of New London is proactively strategizing how to improve downtown transportation and future parking needs. A major transportation study was completed by Milone & MacBroom, who were hired by the City of New London. Their February 2017 report is called *New London Downtown Transportation & Parking Study*. If the recommendations in the report are implemented, including adding 400 spaces at the Water Street Garage, future issues of not enough parking once the Museum opens will be alleviated to some degree.

Based on the study and the city's intent to implement many of its recommendations, a city Parking Authority representative stated that a year ago he would not have said that the Museum's parking demand could be met, but with current plans in place it should be manageable. The city's goal is to have about 4,000 spaces, in lots and surface parking, by 2022. In the spring of 2018 the city started maintenance and improvement projects, including better traffic routing, at the Water Street Garage across the tracks from the Museum site. The project is expected to be completed by the summer of 2018. The city is also discussing discounted parking rates for Museum visitors.

A survey conducted as part of the study indicated that 89% of commercial business, tourist destinations and residential communities anticipated an increase in visitors, patrons or residents over the next five years.

At the time of the Milone and MacBroom study there were 1696 spaces in three garages and one lot in downtown New London. A survey during peak summer times showed that from Friday evening through Sunday morning utilization rates ranged from 47% to 74%. Based on projected increases in needs the projected utilization rates, on peak summer days, ranged from 99% to 133%, indicating there are not enough parking spaces. The shortage is about 800-850 parking spaces during peak times. The study ultimately recommended that a new parking garage be built and also recommended some short-term measures that could be implemented until the new garage is built, including more use of the currently underutilized Governor Winthrop Garage and increased public access to privately held parking. The study did not appear to include on-street parking, of about 1800 spaces.

The study recommends that new public parking of around 350 new spaces (the city is planning on adding 400 at the Water Street Garage) be added, that the public get access to private parking (around 250 spaces) and recommends implementing strategies to shift automobile demand to other modes of transportation, reducing need by about another 250 vehicles. Those initiatives would avoid a future parking shortage.

For considerably more detail regarding the findings of the study, including future parking needs and ferry passenger growth, see Attachment E, "Market Assessment Background Data."

Tourist Market

Trends in the tourist market, a key market for the Museum, over the past few years are mixed with some conflicting data. Some attractions saw increases in attendance, others a decrease. The casinos had a large increase in visitorship between 2013 and 2016, yet tourism sales for recreation in New London County showed continued decreases from 2011 through 2015.

State support for tourism is often calculated by the funds put into the Statewide Tourism Marketing Fund. Support has declined significantly. The fund was as high as \$15 million in 2012

but declined to \$6.4 million in 2017. The proposed budget for 2018 is \$4.1. Travel indicators have generally declined in parallel with the declining marketing budget.

According to the December 2015 CT State publication, *Tourism Tracker*, in 2015 the State of Connecticut experienced a 12% increase in visits to some of the state's top attractions and a 4% increase in overnight stays of four nights or longer. Summer hotel occupancy grew from 63% in 2012 to 69% in 2015.

Some of these are short-term trends that are not necessarily predictors of future trends. There are many factors that can affect tourism year to year, such as inclement weather, the economy and gas prices.

The number of ferry terminal passengers has increased and is expected to continue to increase, though it is unclear what percentage of the passengers are leisure visitors.

Tourism Sales New London County (millions)

National Coast Guard Museum

	Recreation % of Total	Recreation	Change	Total Tourism Sales (\$MM)	Change
2011	76%	\$1,874.8		\$2,481.8	
2012	74%	\$1,762.7	-6.0%	\$2,387.1	-3.8%
2013	72%	\$1,620.1	-8.1%	\$2,251.2	-5.7%
2014	70%	\$1,527.8	-5.7%	\$2,197.3	-2.4%
2015	68%	\$1,495.2	-2.1%	\$2,205.1	0.4%

Table 12.1

Source: The Economic Impact of Travel in CT for Calendar Year 2015, by Tourism Economics

The State of Connecticut has tracked attendance at museums and attractions for many years. In July of 2015, monitoring transitioned from the State to *Witan Intelligence*. At that time the panel of participating attractions was increased from six to 23. Their data is used as a measuring tool to help the State determine how attractions are faring. In 2015/2016 total attendance at the 23 participating museums and attractions was 6.6 million visitors. Both Mystic Seaport Museum and Mystic Aquarium are part of the survey. *Witan Intelligence* may be expanding the panel to 30 attractions in 2018. The attendance data represents only a sample of all attractions in the state.

As shown in the Table 12.2, in 2015/2016 (December through November), attraction attendance was 6,680,533 at the 23 state attractions, a .3% decline from the prior year. 2017 attendance, tracked through August, indicated a 7.1% decline.

Attendance at 23 CT Attractions
National Coast Guard Museum

	2014/2015	2015/2016	2016/2017
Dec	548,101	526,204	461,937
Jan	271,281	306,024	259,900
Feb	239,962	296,427	288,432
Mar	345,468	398,919	293,702
Apr	447,243	505,857	472,427
May	556,369	539,210	477,234
Jun	719,254	742,604	673,185
Jul	992,329	897,191	895,651
Aug	1,000,491	938,348	960,758
Sept	571,142	512,646	
Oct	596,602	620,583	
Nov	409,185	396,520	
TOTAL	6,697,427	6,680,533	
		-0.3%	
Thru Aug	5,120,498	5,150,784	4,783,226
Change		0.6%	-7.1%

Table 12.2

Source: CT Visitor Attendance Index, Witan Intelligence, Inc.

Table 12.3 presents data for four attractions in the area. Both Mystic Seaport Museum and the Mystic Aquarium experienced modest increases in attendance since the 2013 data presented in *Addendum 2014*. The attraction attendance numbers should be taken with a grain of salt as numbers are rounded by the data providers and providers know that these will be public numbers comparing different attractions.

Mystic Seaport opened a new indoor exhibition center to complement their outdoor activities and to help mitigate the issue of inclement weather impacting attendance at an outdoor venue. Mystic Aquarium's strategic planning assumes an increase in future visitation.

The Submarine Force Museum attendance declined since 2013. This is partially attributable to heightened security measures at the Museum. They are in the process of making some program changes that they hope will boost attendance. The New London water taxi expanded its route in 2018 to connect New London and the Submarine Force Museum and that will be beneficial to both entities.

The CT Science Center experienced a 4.8% decrease in attendance since 2013. It is not known if that was due to programming changes such as a temporary exhibit that may have boosted attendance in a prior year.

Attendance by schoolchildren at Mystic Seaport Museum has been about 20,000 and at the CT Science Center 50-60,000.

Attendance at Selected Regional Attractions

National Coast Guard Museum

Year	Mystic Seaport	Mystic Aquarium	CT Science Center	Submarine Force Museum & Nautilus
2007	300,000	750,000	n/ap	160,000
2008	300,000	750,000	n/ap	137,500
2009	300,000	714,425	opened 2009	141,800
2010	250,000	700,000	283,478	150,955
2011	275,000	700,000	266,660	141,800
2012	275,000	729,522	291,721	150,000
2013	250,000	700,000	298,286	150,000
2014	250,000	675,776	303,564	no data
2015	258,829	662,224	298,471	125,639
2016	263,324	718,993	284,006	138,561
(7 yr. avg)				
2016 over 2013	5.3%	2.7%	-4.8%	-7.6%
Ten Year Average	272,215	710,094	289,455	144,028

Table 12.3

Source: Hartford Business Journal Book of Lists, various years except for the CT Science Center with data derived from 2016 ASTC Science Center Statistics, Copyright © Association of Science-Technology Centers, Washington, DC, www.astc.org and White Oak Associates, Inc.

The Casinos

Two new attractions coming onto the market in Southeastern CT are planned for the Foxwoods Resort Casino. A Karting facility is scheduled to open in 2018 and a Thrill Tower has already opened. Foxwoods announced in 2017 that their long-term plan includes developing a “comprehensive portfolio of ecotourism options”, starting with the opening of the Thrill Tower. The Thrill Tower includes two rides, the Sky Drop and Sky Launch. The Karting facility will be a top-of-the-line, multi-level track with elevation changes, hairpin turns and gas-powered karts. Foxwoods also announced it will be opening a HighFlyer Zipline. These attractions are high adrenaline rides. They are also family friendly and may attract more families to the casino resorts, a good fit with Museum.

Mohegan Sun is building a large conference center, over 100,000 SF. The casino has a department for tourism that Museum staff should contact to promote visits to the Museum.

In 2017 MGM Resorts International announced plans for a new casino in CT. It is scheduled to open in 2018, but, as of December 2017, the MGM casino had not been approved by the CT State legislature. The announcement said it would be a \$675 million waterfront casino in Bridgeport. MGM is already building a nearly \$1 billion casino in Springfield, MA, due to open in August 2018, that could take revenue, customers and jobs away from the Foxwoods Resort Casino and Mohegan Sun.

There is concern that Foxwoods and Mohegan Sun will lose visitors once the Springfield complex opens. In response, the Mashantucket Pequot and the Mohegan tribes jointly proposed a casino, which would be located in East Windsor, near Hartford. Though it has been approved by the State it awaits Federal approval and currently is in flux. Demolition has started on the site. In its effort to get approval, the two tribes and the State of CT initiated a law suit against

the US Dept. of the Interior for being negligent in the timing of their response. The suit is expected to be resolved in the spring or early summer of 2018.²

According to the web site, Seeking Alpha, gambling revenues in CT (as well as Nevada and New Jersey) have not recovered from the 2008 global recession. The article indicated that 2015 gambling revenues in CT were down 30% from the year 2007.³ An online article in the CT Mirror indicated that gambling revenue at Foxwoods and Mohegan Sun combined declined to \$265 million in 2016 versus a high of \$430 million in 2007.⁴ Yet the following table shows a dramatic increase in visitorship at both casinos between 2013 and 2016.

Casino Attendance
National Coast Guard Museum

Year	Foxwoods	Mohegan Sun
2012	24,000,000	
2013	9,500,000	5,110,000
2014	8,400,000	7,300,000
2015	12,833,043	7,300,000
2016	12,719,466	9,000,000
Change 2016 over 2013	33.9%	76.1%

Table 12.4

Source: Hartford Business Journal Book of Lists, various years

Additional casinos in the state, farther from the Mystic area, could have an impact on overnight tourism and the number of day trippers to the Mystic area. On the other hand, the addition of the family oriented rides at Foxwoods may bring more families to the area.

Defined Market Segments

The market segments, as defined in the 2008 *Master Plan* and amended to add ferry passengers in *Addendum 2014*, include the following categories:

- 1 Resident Market:** (no geographic change from 2008 *Master Plan* or *Addendum 2014*)
 Primary Market: Residents within a 45-minute drive of downtown New London.
 Secondary Market: Residents within a 70-minute drive of downtown New London.
- 2 Schools:** (no change from *Addendum 2014*)
 In the 2008 *Master Plan*, the school market included students enrolled in PK-12 in four Connecticut counties and three Rhode Island counties. With the new emphasis on tourist visitors as well as the tight travel budgets for schools, *Addendum 2014* amended this market to exclude two counties in Rhode Island, Kent and Providence, but continued to include Washington County in RI, which is adjacent to New London County.

² Las Vegas Sun, September 18, 2017, David Collins, Associated Press, article on the Web accessed 12/8/2017.

³ <https://seekingalpha.com/article/4104013-growing-gambling-facilities-northeast-u-s-market>, Growing Gambling Facilities in the Northeast U.S.: Is there a Market for Them All? Elliott R. Morse, Sept. 4, 2017. Accessed 12/8/2017

⁴ <https://ctmirror.org/2017/12/05/mgm-tribes-open-new-fight-over-casino-expansion-in-connecticut/>, Accessed April 14, 2018

Connecticut	Rhode Island
New London	Washington
Middlesex	
New Haven	
Windham	

- 3 **Overnight Tourists:** (Same market as in 2008 *Master Plan* and *Addendum 2014*)
Refers to persons spending the night in southeast CT and the greater New London area who reside outside of the two resident markets. Tourists include business as well as pleasure travelers.
- 4 **Ferry Passengers:** (Same market definition as in *Addendum 2014*)
This category includes the estimated number of passengers departing from and arriving to the terminals in New.
- 5 **Cruise Ship Passengers:** (No longer part of the market segments)
Cruise ships are no longer coming to New London.

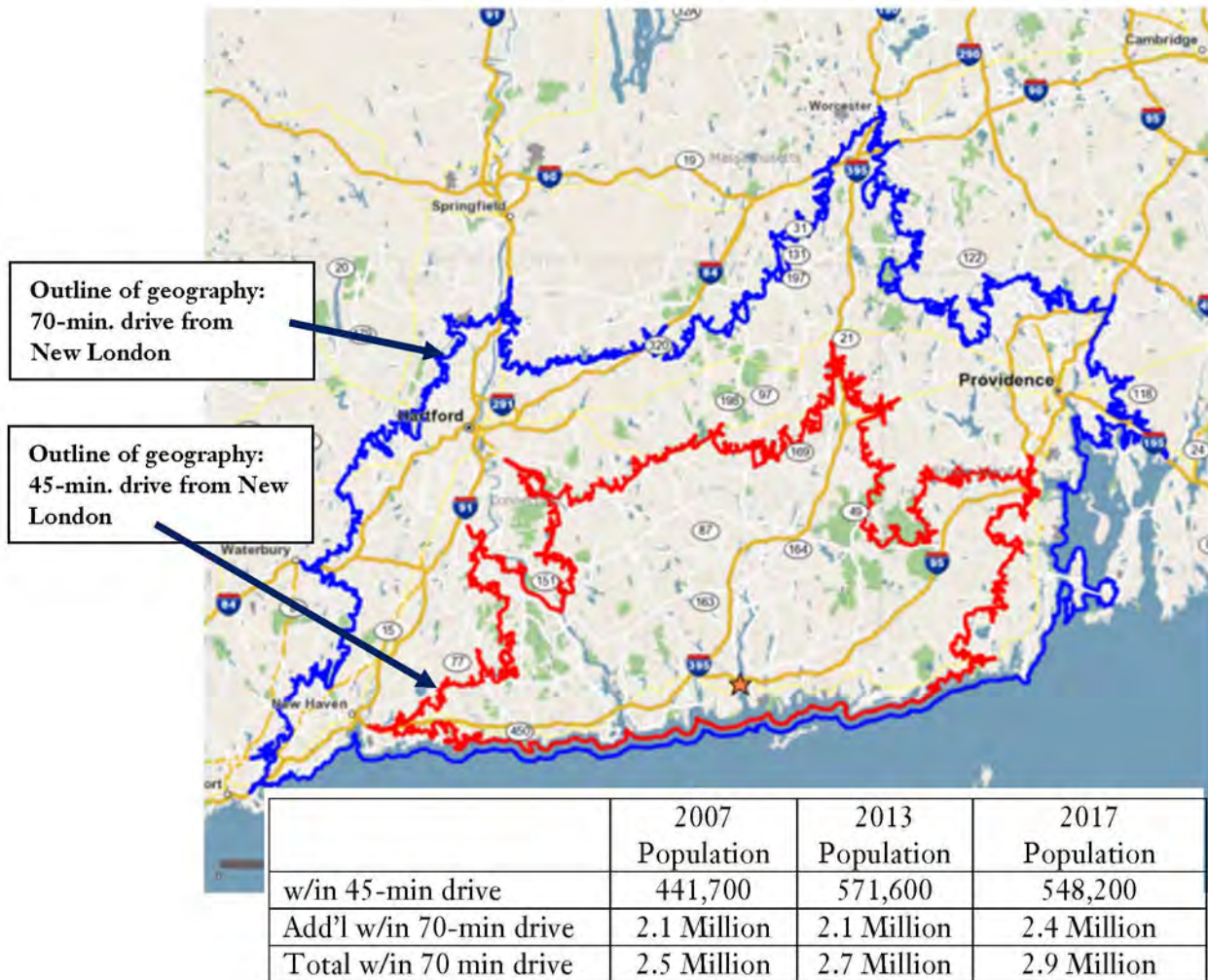
Even though these are the defined the market segments, the Museum will still draw from other markets or areas beyond those included in the resident market segments. There is also a large daytripper market that drives by on I-95. That market has not been specifically factored into the attendance as many of those people are already counted in the defined resident markets and the State's overnight tourist markets. A daytrip is often categorized as driving approximately 50 miles one way. Much of the State of CT is within 50 to 60 miles of New London except for Fairfield County and Litchfield County.

The map on the following page delineates the geographical boundaries within 45- and 70-minute drives from New London. Between 2013 and 2017 the population within a 45-minute drive decreased by almost 23,500 persons, but between 2007 and 2017 increased by 107,500, so a net increase of 84,000.

Between 2007 and 2017, the population within a 45-70-minute drive increased by approximately 275,000 persons. The Secondary Residential Market includes the cities of Providence, RI, Hartford and New Haven in CT and reaches to Worcester, MA.

Overall, the population increase between 2007 and 2017 was 382,000 persons.

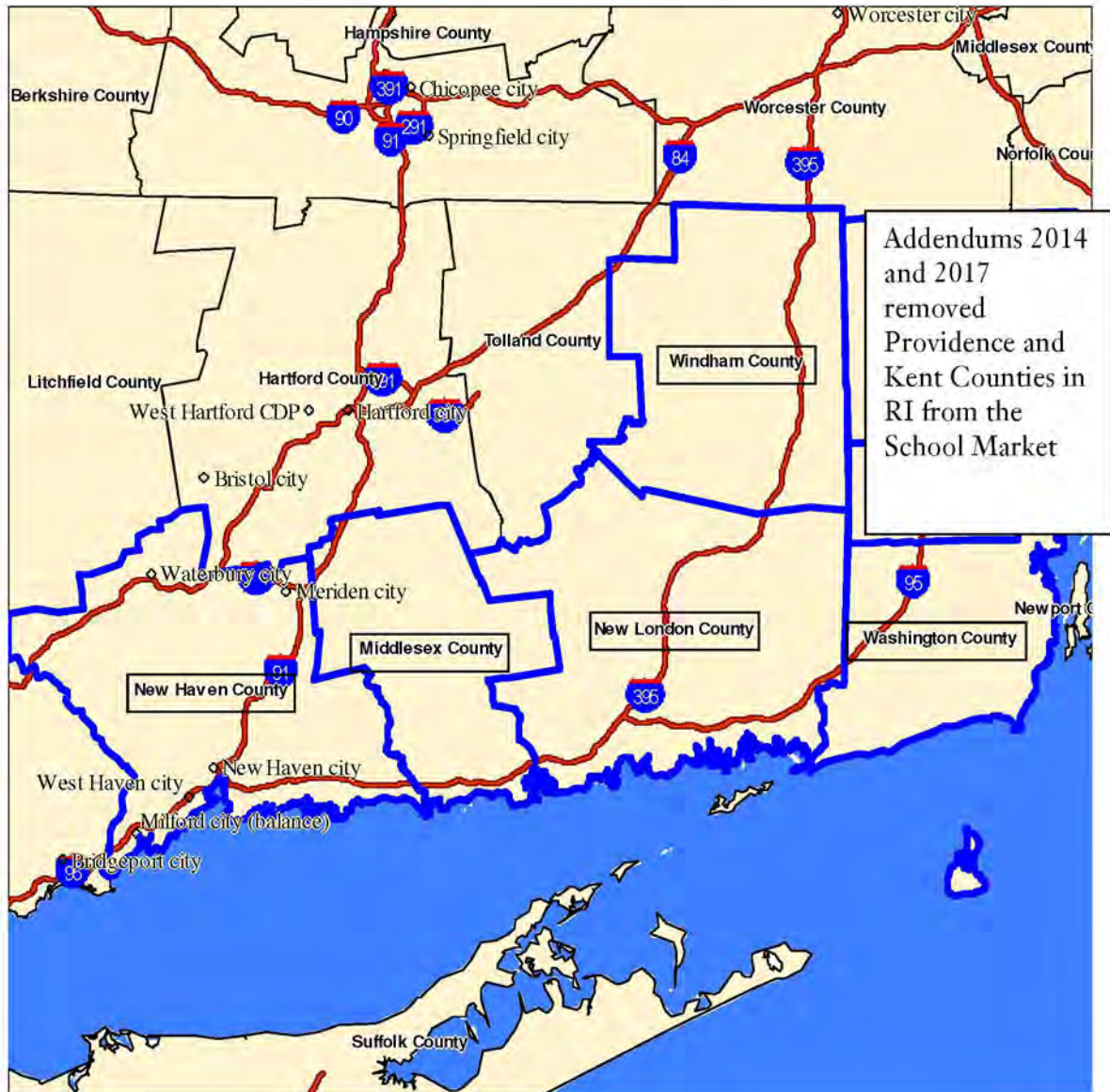
Map with Delineation of 45 and 70-Minute Drives from New London
National Coast Guard Museum



Map 12.1

Source: eSite Analytics, SRC DemographicsNow, Alteryx and White Oak Associates, Inc.

Defined Five-County School Market
(The five county names are outlined with a border.)
National Coast Guard Museum



Map 12.2

Source: eSite Analytics, SRC DemographicsNow, Alteryx and White Oak Associates, Inc.

Table 12.5 presents population projections by market segment for the year 2025, which will be a “normalized” or “stable year” year of operations at the Museum. The Association currently expects opening of the Museum to be May 28, 2022, Labor Day weekend. The normalized year is four years after opening, when attendance will be driven more by programming and marketing choices than the excitement surrounding the opening of a new facility.

By 2025 the resident population within a 45-minute drive is expected to increase by about 52,000 persons compared to 2017 and by an additional 49,000 persons within a 45-70-minute drive. So the total increase is about 100,000 persons.

The School Market

Between 2010 and 2015, Connecticut's population of school-aged children decreased by 3.46%, the sixth highest rate in the nation, according to data from the US Census. Projections published by the National Center for Education Statistics indicate Connecticut could see a 14% decline in public elementary (including prekindergarten) and secondary school enrollment between 2014 and 2026.

The Connecticut State Data Center at the University of Connecticut, in a census-driven study released in 2012, predicts that New London's school age population will drop from 4,813 in 2015 to 3,836 in 2025, but there is conflicting data in regard to those projected trends.

According to an article on The Day's Web site⁵, the school districts contracted their own study, completed in 2015, to project capacity for future school construction projects. The *New London Public Schools Enrollment Projection Report*, prepared for the school board by consultants Milone & MacBroom, predicts an increase in the school population in out-of-district students and residents.

The Milone & MacBroom study projects a total New London school population of about 4,300 by the 2023/2024 school year. The out-of-district student population is predicted to double to 1,088 with smaller gains in the number of students from the city.

Enrollment increases from 2011 on were mostly due to development of magnet programs which have drawn and continued to attract out-of-district students. Two new grades 6-12 magnet schools were planned in the New London school district, with one expected to start construction in 2018.⁶ One of the existing magnet schools is a STEM school. The district had hoped to become the first all-magnet public school district in the state. That goal seems to be in a state of flux as the New London district and the state are not totally aligned.

Recent reports indicate that New London had planned on four magnet pathways but that has been reduced to three pathways. Based on March 2018 information published in The Day online quoting a statement from the state Department of Education, the current plan is to have "one overarching 6-12 magnet school with options for students to select a focus in STEM, Arts and Global Studies."⁷ The physical location of the magnet pathways has changed from grades six through 12 to middle school and high school.

White Oak's estimates for school population numbers in 2025 for Connecticut are based on projected county population by age developed by the CT State Data Center at the University of CT. School projections by the Rhode Island Statewide planning project that the school population will decline by about 11,500 students between 2017 and 2025.

The Overnight Tourist and Ferry Passenger Markets

The overnight Southeast CT tourist population is estimated to be the same as in *Addendum 2014*. There are no hard numbers for overnight tourism or for the number of tourists to the region. The original estimate, as is the case in this *Addendum 2017*, was based on hotel/motel data, occupancy, average party size and average length of stay. Trends in tourism and attraction attendance appear mixed, with growth in attendance at some attractions and the casinos, but a decrease in visitor spending on recreation, including casino revenues.

⁵ The Day Web site, published April 5, 2016 by Greg Smith, accessed December 2017

⁶ The Day Web site, published September 7, 2017 by Greg Smith, accessed December 19, 2017

⁷ <https://www.theday.com/article/20180309/NWS01/180309319>, accessed April 14, 2018

The numbers of hotel/motel rooms in different regions of CT are collected by the Smith Travel Research group, which tracks member data. It is proprietary data that cannot be published in this report but the data were used to develop the estimated number of tourists to the Mystic Country area. The number of rooms has increased somewhat since *Addendum 2014*, which noted about 9,000 rooms. Demand for rooms increased between 2014 and 2017.⁸

The calculation for overnight tourists is based on the following formula:

$$\begin{aligned} &\text{Overnight tourists in hotels/motels} = \\ &\text{number of rooms} \times \text{average party size} \times \text{annual occupancy} \times 365 \text{ days/year} \\ &\text{divided by average length of stay} \end{aligned}$$

That number is then factored up by the estimated percentage of visitors that are staying with friends or relatives or in some other accommodation besides hotel/motel rooms. Sources for the data included Smith Travel Report and the 2016 Vision Intercept Studies for the state and the Mystic area conducted by Witan Intelligence for the State of CT.

The same number of 5,900,000 overnight tourists in *Addendum 2014* was used in this *Addendum 2017*. This number may be conservative. A report from February 2005 for the Southeastern CT Council of Governments entitled, *Intermodal Connections Study Southeastern CT*, estimated that there were 11.4 million overnight visitors in 2003, although that number appears to have included daytrippers passing through the region on their way to Cape Cod and Rhode Island. It was unclear whether that group actually spent the night in CT. Their numbers for overnight visitors totaled 8 million.⁹

Other data from that report indicated that Foxwoods and Mohegan Sun had an estimated 25 million visits. The vast majority of their visitors (90%+) were daytrippers, not overnight visitors. If 10% were overnight visitors that would calculate to 2.5 million, just to the two casinos. Other leisure attractions like Mystic Seaport and Mystic Aquarium estimated that roughly two-thirds of their attraction patrons were overnight visitors.¹⁰

Based on new attractions being developed by the casinos, renovated and new exhibits at Mystic Seaport and the projected increase in ferry passengers in New London, a small increase of 1.5%, over numbers in *Addendum 2014*, is used to estimate overnight tourism in 2025. That percentage is less than the anticipated population growth for the residential markets, which is 3.5%. Tourism from visiting friends and relatives increases as the population grows.

The ferry terminals had an estimated 1.4 million passengers in 2016, compared to 1.3 million passengers in the *2014 Addendum*. Projections by the ferry terminals operators, as discussed earlier in this chapter, indicate that the number of ferry passengers is estimated to reach 1,750,000 by 2025.

The projected population increase between 2017 and 2025 for all market segments is expected to be 427,000 persons.

⁸ http://www.cultureandtourism.org/cct/lib/cct/tourism/tourismtracker/tourismtracker_040918.pdf, Accessed April 18, 2018.

⁹ http://www.seccog.org/pdfs/ch3tourist_mrks%20rpt.pdf, Accessed April 18, 2018

¹⁰ Ibid

**Population by Market Segment
2017 and Projected Stable Year 2025**
National Coast Guard Museum

	Population 2017	Projected 2025	Change
Primary Market: Population with 45-min drive	548,163	600,533	52,370
Secondary Market: Add'l Population w/in 70-min drive	2,372,142	2,421,183	49,041
PK-12 School Children	243,528	232,000	-11,528
Subtotal Resident Market	3,163,833	3,253,716	89,883
Overnight Tourists Southeastern CT	5,900,000	5,989,000	89,000
Ferry Terminal Passengers	1,500,000	1,750,000	250,000
Total/Cumulative	10,563,833	10,992,716	428,883

Table 12.5

Sources: eSite Analytics, National Center for Education Statistics Web Site, State Commission of Culture and Tourism publications and White Oak Associates, Inc.

Coast Guard Personnel

As the National Coast Guard Museum will have a national reach, it is useful to have an understanding of the total size of the Coast Guard community. Active and Reserve uniformed personnel number almost 48,000 and retired personnel over 50,000.

No data are available for the extremely large market of formerly active or reserve Coast Guard personnel who did not make the Coast Guard a career.

Coast Guard Population
National Coast Guard Museum

Category	2007	2013	2017
Active Duty	48,715	48,838	40,992
Reserve PT	In above	In above	7,000
Auxiliary	28,874	32,077	31,000
Civilian	8,523	8,270	8,577
Total Workforce	86,112	89,185	87,569
Retired	45,818	47,370	50,139
Total Workforce and Retired	131,930	136,555	137,708

Table 12.6

Source: USCG; for 2017: <http://www.overview.uscg.mil/Workforce/> Accessed 12/8/2017

Full-time Permanent Positions by Year: Active Duty and Civilian
National Coast Guard Museum

Year	Full-time Permanent
FY 2013	50,280
FY 2014	49,908
FY 2015	49,392
FY 2016	49,569
FY 2017	49,894

Table 12.7

Source: USCG Web site: <http://www.overview.uscg.mil/Workforce/> Accessed 12/8/2017.

Project Assumptions

Attendance potential estimates cannot be done in a void; rather, they must be considered as only one aspect of an integrated economic model. For instance, attendance is related to the amount of capital invested, marketing expenditures for the launch of the Museum and yearly thereafter, the quality of the exhibits, the programming strategies and how often exhibits change, ticket prices, the appeal of films and more. Changes to any of the main operating and capital assumptions are likely to change the attendance potential estimate. Major changes in the economic, tourist and competitive environment, as well as the weather, can also affect attendance.

In developing an estimated attendance potential analysis, the following key items, issues and understandings have been assumed.

- 1 The Museum will be created in a scale, manner and program as described originally in the 2008 *Master Plan* and updated in this *Addendum 2017*.
- 2 The Museum will have the components and programs and sizes listed in the architect's take-offs from their December 2017 Schematic Design, as updated in this *Addendum 2017* and as amended by White Oak Associates in Chapter 20, "Architectural Program," in this *Addendum 2017*.
- 3 The exhibits will be of sufficient high quality in design and construction.
- 4 The new ferry terminal will be built adjacent to the Museum and that a pedestrian bridge will be built connecting the Water Street Garage leading to the Museum and the new ferry terminal. The pedestrian bridge will be used by ferry terminal passengers, Museum visitors and others. The current design allows people to enter the Museum directly from the pedestrian bridge. If that changes it could have an effect on attendance at the Museum.
- 5 The exhibits will be of great appeal to the tourist market as well as the resident market, including school children. It will also be appealing to current and former Coast Guard civilian and military personnel and their families.
- 6 There will be a sufficient number of parking spaces in New London to accommodate visitors on a busy summer weekend and that parking issues will not deter visitation.
- 7 The capital campaign will be successful at raising all funds, on schedule and without debt (except possibly minor provisions for bridge financing against pledge payments).
- 8 Once the completed Museum is turned over to the Coast Guard, the assumption is that the Museum will be owned, operated and maintained by the Coast Guard.

- 9 The forecasts are based on research performed and secondary data obtained by White Oak Associates in 2008, 2013, 2014, 2017 and 2018, as well as from data/research compiled in other markets relating to museum performance, as deemed appropriate for this study.
- 10 The data obtained by White Oak from responsible sources in the New London and Mystic areas are accurate and reliable.
- 11 That these assumptions continue to hold true. Any significant changes in the components, site, budget or other key elements of the definition may change the estimate of attendance potential. Changes in the market environment, such as a recession or a downturn in tourism, could also affect attendance.
- 12 The estimate is for the potential attendance. The actual attendance for the Museum may, of course, not reach its potential unless the quality and extent of the site development, architecture, design, construction, staffing, marketing, ticket prices (exhibit galleries assumed to be free), operating hours and programming is up to the level of comparable and area museums. In addition, external factors such as the economy, weather and tourism fluctuations will affect potential.

In addition to the project assumptions listed above, to reach its attendance potential, the Museum will need to achieve the following:

- Reflect and embrace the needs of the community;
- Be entertaining and fun as well as educational;
- Be viewed as a significant national facility;
- Successfully appeal to and attract tourists and ferry passengers, especially in summer and secondarily in fall and spring, which are also strong tourist seasons in southeast Connecticut;
- Successfully attract resident visitors, especially in the winter;
- Appeal to boating enthusiasts; and
- Attract the support of corporations and donors.

Summary of Market Opportunities and Challenges

The following two paragraphs from the original 2008 *Master Plan*, updated in some aspects, still apply today.

Overall, the New London/Mystic market is a good fit for the National Coast Guard Museum. There is an extremely large population base within a 70-minute drive, with residents that are wealthy and well educated, key characteristics of museum visitors. Because the Museum will represent the Coast Guard, it should appeal to a broader group of visitors than is typical for most museums. Southeast CT is the most popular tourist area in the State and the region is known as a center for maritime activities and study. New London is just off Interstate 95 and is a major transportation hub (rail, bus and ferry), with millions of travelers. Proximity to the Coast Guard Academy is advantageous. Proximity to a body of water, the Thames River, is also important. Proximity to the ferry passengers is a huge benefit as they number between one and two million. It is anticipated that the largest number of visitors to the Museum will be ferry passengers.

Some of the challenges that were identified previously are being or have been addressed. Although the City of New London's demographics were not well aligned with potential museum visitation and the population is small, the downtown is being developed and a new population of

younger and well-educated persons is moving in. The city projects some population growth. The perception of downtown safety has been problematic but that has improved as well. Although the City of New London is not a major tourist destination itself, events like the three-day OpSail, which attracted over one million people, or the more recent SailFest (200 – 300,000 people), indicate that large numbers of visitors will come to New London for leisure activities.

Attendance Potential

The attendance potential estimates are based on applying several methodologies, which converge on a figure; the methods include an analysis of:

- Size and quality of the proposed Museum
- Current and projected resident population
- Size of the PK-12 school population
- The number and profile of overnight tourists to the area
- The number of ferry terminal passengers
- The health of the local economy and overall trends in New London
- Estimated capture rates by market segment based on museum industry data
- Attendance at other local and regional attractions
- Attendance and market capture ratios for a selection of military museums and science centers

The term potential is used because the Coast Guard Museum's operations and potential are being compared to other museums that have been operating for many years. Its future attendance reflects the potential if the Museum performs similarly to other more mature museums.

The attendance potential relates only to on-site visitation and does not include adults and children that may be reached through outreach or distance learning or who might access the Museum's Web site.

The attendance potential is for a "normalized" or "stable" year of operations, which is expected to be year four after opening. The Association expects opening year to be in 2022 and thus the normalized year is 2025. Normalized means that attendance is driven more by programing, marketing and other operating choices rather than the excitement surrounding the opening of a new museum. Museum industry trends indicate that opening year can have as much as a 30% increase in attendance over a normalized year. Marketing and programming choices can alter these trends.

Reasons for Attendance Increase over Addendum 2014

There are many reasons that the Planners believe the attendance potential can be increased over the estimates in both the 2008 *Master Plan* and *Addendum 2014*:

- Larger resident population
- Continued improvements to downtown New London and growth in businesses and jobs.
- Planned expansion of the Water Street Garage and implementation of recommendations to improve traffic flow downtown.
- Projected increase in the number of ferry passengers.

- The addition of the STEM Learning Center allows programming for school and other groups. This will boost attendance in the winter season when more residents than tourists will use the facility. Planned programs like the Qualifications Program should attract groups like the Boy and Girl Scouts and teens.
- The Early Learning Gallery, added to the architectural program, will attract caregivers with young children and will increase resident attendance in the winter.
- A Feature Theater re-instated in the program, showing a free signature film as part of the visitor experience during the day. The theater can be used at night for other events and presentations.

There are few changes since *Addendum 2014* that might negatively affect attendance:

- One possible issue, depending upon the amount of security screening, could be lines of people during peak summer times waiting to get into the lobby, since all visitors will enter from one access point once they are in the building. From operational cost and security perspectives, having one entry point is beneficial.
- Although the number of school children expected to attend annually is conservative, there can be funding issues getting children from other school districts to bus into New London. The Submarine Force Museum has had difficulty getting students in from other districts, but the Mystic Aquarium and Mystic Seaport are able to attract students from a broader area.
- In this age of heightened security visitors will not be able to enter the galleries with roller board luggage. Some number of ferry passengers who might on the spur of the moment decide to will have roller boards. Currently there is limited space for any storage on-site and people will be turned away. Having some storage space nearby, possibly at the Ferry terminal, would be helpful.
- Caregivers with very young children may have large strollers with them. Large strollers are generally not allowed into museums. There needs to be a place for caregivers to park the strollers and that is problematic in the current design of the building.
- If a new casino is opened in Bridgeport and/or E. Windsor, CT, it could affect the number of persons going to the Mystic Area casinos and the Mystic area.

Capture Ratios

The attendance potential is based on applying capture ratios to each of the projected “stable” year 2025 market segment populations, using historical captures ratios at other museums as a guideline.

Primary and Secondary Residential Markets

Although there are museum industry data in regard to normal ranges of capture ratios of the resident population, the accessible data are for museums in defined geographic boundaries such as metropolitan areas. Often that data is further refined for comparative purposes to include museums with similar population sizes and museums of similar size and components.

Small communities like New London are outliers, which makes it difficult to apply standard capture ratios. Since New London is not a metropolitan or micropolitan area, the residential markets were defined by drive-time.

Another similarity among museums in metropolitan areas is that they are able to reach a large population through media, print, TV. But a small community, like New London, has much less media reach. Its local paper will not reach most of the communities and their residents within the 45-minute drive parameter of the Primary Market, much less the Secondary Market. The Day, the daily New London paper, only reaches 40,600 Monday through Saturday and 46,400 on Sundays. The Museum will have the advantage of being visible from the bus depot, the train station and the ferries. The Museum will have some, but limited, visibility for those crossing the bridge over the Thames on I-95.

The capture ratios applied to the Museum's Primary Market are 9% in the low model and 13% in the high model, lower than those for Museums in metropolitan areas that generally range from 10% to 30%. In addition to the issue of limited media reach, there is competition in the area, especially in the Secondary Market which includes, Providence, RI, Hartford and New Haven in CT and into Worcester, MA.

A rule of thumb is that the Secondary Market capture ratio is about one-quarter of that of the Primary Market, but that is when the markets are divided into Metropolitan areas and Designated Market Areas (a Nielsen designation indicating the geographic reach of a television station). A more conservative approach was used for the Museum.

School Market

Based on industry data for 19 museums who are members of and participated in the 2016 survey of the Association of Science-Technology Centers, capture ratios of the school market ranged from less than 2% to high of 10%. The average was 5% and the median 4%. The capture ratio used for the Museum is more conservative, based on the reasons indicated below.

Overnight Tourist Market

Museum industry trends show that capture ratios of the tourist market are often in the 5% range, less or more depending upon the amount of competition in an area. The museum planners feel that a much more conservative capture ratio is warranted as many of the overnight tourists are in the area for the casinos, generally a different market than museumgoers.

Ferry Terminal Passengers

There are not enough comparable situations where a Ferry Terminal is located adjacent to a museum for there to be standard capture ratios for this market. The planners do not have data regarding the make-up of the ferry terminal passengers. During the course of conducting research for this report, the planners contacted Cross Sound Ferry, but despite repeated attempts, were unable to attain any data. Some data were available from public reports but the data did not include profiles of the passengers, such as what percentage are commuters, leisure travelers, casinos visitors, overnight visitors or were just passing through on their way to another state. Data on what percentage purchased round-trip tickets was also not available.

The planners believe it is reasonable to assume that the capture ratios of the ferry terminal passengers will be higher than those generally applied to tourist markets as the Museum will be free and located adjacent to one of the ferry terminals, with which it will share a pedestrian bridge from the Water Street Garage leading directly to the Museum.

Anecdotal evidence indicates that passengers leaving from the terminals often arrive early enough that they have time to do other activities. The capture ratio range of 8% to 10% for the Museum includes persons using all the ferry terminals, not just the one that will be adjacent to the Museum.

One reference regarding passengers is that, of the number who are “walk-ons,” those not coming by car, almost half arrived by a casino bus. It will be important to develop a partnership with the casinos so that they will promote visiting the Museum.

Combined Overnight Tourist and Ferry Terminal Passenger Markets

Without better information on the visitor characteristics and patterns of the ferry terminal passengers, it is hard to know how much of an overlap there is between the Museum’s defined Overnight Tourist market and the ferry terminal passengers. Not all of the passengers are overnight visitors. Some may be residents, some daytripper tourists and others commuters. It is possible that the capture ratios for the Overnight Tourist market could be higher than those indicated in Table 12.9 and lower for the ferry terminal passengers. But the total number of visitors, which ranges from 188,900 to 279,800, seems reasonable for the combined markets.

Mystic Seaport and the Aquarium have estimated that about two-thirds of their attendance comes from overnight tourists. Using 272,000, the ten-year attendance average at the Seaport, translates into attendance of 179,520 from overnight tourists. Note that Mystic Seaport has limited access in January through early February, when Seaport Village and the Shipyard are closed as they are outdoor venues.

Using the ten-year average attendance of 710,000 at the Aquarium translates into attendance of 468,600 from overnight tourists. Attendance for the National Coast Guard Museum, based on the medium scenario for overnight tourists and ferry terminal passengers, totals 233,000, between that of the Seaport and the Aquarium, which appears reasonable. The 233,000 calculates to 68% of the Museum’s attendance potential.

Capture Ratios for Association of Science-Technology Center Members

The Association of Science-Technology Centers conducts an annual survey of its members, collecting operating data, including attendance. A subset of the survey respondents was used to compare selected operating data and attendance to those for the Museum. The subset included 19 museums with exhibit square footage of 15,000 to 40,000 SF. Table 12.8 shows data for the median, average, minimum and maximum for the respondents, as well as data for the National Coast Guard Museum. Note that this subset of survey respondents is different than the one used in Chapter 16, “Five Year Operating Profile,” as the focus is on attendance data.

Two of the ratios are calculated by dividing on-site attendance and school attendance by the metropolitan population. This ratio is not a “capture” ratio as it is not capturing a particular market segment. It includes visitors from all markets.

The median for the 19 museums and centers was 35% and the average 39%. The same ratio for the Museum, using the Primary Market for the equivalent of a metropolitan area, is 49%. This seems reasonable as the Museum will be free and all the other museum respondents charge admission. Free admission normally increases attendance significantly.

Population data shown for the National Coast Guard Museum is the projected 2025 Primary Market population.

**Comparison to Association of Science-Technology Centers
(Science Centers with 15,000-40,000 SF of Exhibit Galleries)**

National Coast Guard Museum

2016 ASTC Survey Data and NCGM Model	2016\$	2016\$	2017\$
U.S. Science Centers	ASTC	ASTC	Year 4
Exhibit 15k to 40k SF	Median	Average	USCG
# of Respondents	19	19	(No NCGMA)
Total Sq. Footage	48,000	56,117	72,325
Exhibit Sq. Footage	21,600	24,730	25,425
Total On-site Attendance	129,919	159,416	292,000
Population (Metro, Primary for NCGM)	414,824	486,192	600,533
On-site % of Resident Population	35%	39%	49%
Students in Groups served on-site	16,396	21,679	10,000
On-site % of Schools	4%	5%	2%
Percent charging Admission	100%	100%	
Percent with no Admission Fee	0%	0%	
Adult Tx Price	\$11.00	\$11.78	free

Table 12.8

Source: Data is derived from 2016 ASTC Science Center Statistics, Copyright © Association of Science-Technology Centers, Washington, DC, www.astc.org and White Oak Associates, Inc.

Attendance Potential Scenarios

Taken together, these perspectives lead the museum analysts to factor museum-industry average attendance capture ratios up or down in light of the Museum and New London's unique circumstances:

- **Primary Market:** Lower than normal because New London is a very small city and is not a metropolitan area.
- **Secondary Market:** Lower than normal because New London does not have a media market that easily reaches the residents in this market. There is also considerable competition from attractions in other cities in this market.
- **Schools:** Slightly lower than industry norms, due to the limited space in the Museum to deliver programs, the difficulty in attracting students from other districts as experienced by the Submarine Force Museum, the difficulty in attracting students from districts in another state, in this case Rhode Island, and competition for student's out of school time from other attractions who already have well-established programs for school children.
- **Overnight Tourists and Ferry Passengers:** As a combined market, slightly lower due to the large number that visit casinos and the possible overlap in the Overnight Tourist and Ferry Passenger markets that cannot be quantified.

The range for the projected low and high attendance is extremely large, 270,000 to 418,000, as it reflects both the potential of extraordinary success or underperformance, whether because of economic circumstances, tourism trends, programming choices, site and building design, etc.

The planners do not normally project such a large range but it is appropriate for this project at this stage of planning. The attendance potential in the “medium” scenario is 344,000 visitors.

After applying these factors, the planners further discounted the middle scenario potential of 344,000 persons by 15% (to 292,000) to account for Murphy’s Law - unexpected occurrences. The capture ratios are based on data from mature museums, and the Museum is bound to run across unexpected issues and new competition in the years to come. This discount will also allow the Museum to look good if it exceeds attendance and the Association to see larger surpluses – both better than attendance shortfalls and revenue deficits.

It is recommended that 292,000 be used as the stable year attendance number to be shared with the public and in publications. It is better to be conservative. Not achieving attendance potential is demoralizing to the staff and the community. It is far better to exceed the attendance potential number. Regarding first year attendance, which should be higher, one can say that the attendance in the first two years should be higher if the Museum follows trends experienced at other new museums.

See Tables 12.9 and 12.10 for how these capture ratios translate into the attendance potential estimate.

Compared to the 2008 *Master Plan* the new attendance potential projects a higher percentage of tourist visitors than resident visitors. Attracting ferry passengers will be critical to achieving the attendance potential, since the largest number of visitors is come from those frequenting the ferry terminals.

It will be important to monitor trends for overnight tourism and ferry passenger ridership. If growth in the number of passengers does not occur as currently expected then the attendance potential would be lower.

Low, Medium and High Range Attendance Potential by Market Segment for Stable Year (2025)
National Coast Guard Museum

Stable Year 4 Market Segment	2025 Population	% Capture of Market			Rounded					
		Low	Medium	High	Low Attd	Share of Total	Medium Attd	Share of Total	High Attd	Share of Total
Primary Market: Population with 45-min drive	600,533	9.00%	11.0%	13.00%	54,000	20%	66,000	19%	78,000	19%
Secondary Market: Add'l Population w/in 75-min drive	2,421,183	1.00%	1.50%	2.00%	24,000	9%	36,000	11%	48,000	12%
PK-12 School Children in 5-County Market	232,000	3.00%	4.00%	5.00%	7,000	3%	9,000	3%	12,000	3%
Overnight Tourists to Southeastern CT	5,989,000	0.75%	1.25%	1.75%	44,900	17%	75,000	22%	104,800	25%
Ferry Terminal Passengers	1,750,000	8.00%	9.0%	10.00%	140,000	52%	158,000	46%	175,000	42%
Total/Cumulative	10,992,716	2.5%	3.1%	3.8%	269,900	0.0%	344,000	100.0%	417,800	100.0%
Nominal Attendance Range					270,000		344,000		418,000	
Budget Number for Operating Pro Forma	-15%						292,000			
Total Resident					32%		32%		33%	
Total Tourist					69%		68%		67%	

Table 12.9

Sources: As cited previously

Comparison of Stable Year Attendance Potential by Market Segment: Medium Scenarios
2008 Master Plan, Addendum 2014 and Addendum 2017
 National Coast Guard Museum

Market Segment	2008 Master Plan			Addendum 2014			Addendum 2017		
	Market Capture	Medium Attd	Share of Total	Market Capture	Medium Attd	Share of Total	Market Capture	Medium Attd	Share of Total
Primary Market: Population with 45-min drive	10.5%	46,272	20%	10.0%	59,000	20%	11.0%	66,000	19%
Secondary Market: Add'l Population w/in 70-min drive	3.0%	62,916	27%	1.5%	33,000	11%	1.5%	36,000	11%
PK-12 School Children in 5- or 7-County Market	1.4%	5,656	2%	3.00%	7,000	2%	4.0%	9,000	3%
Overnight Tourists to Southeastern CT	2.0%	118,000	51%	1.3%	74,000	24%	1.3%	75,000	22%
Ferry Terminal Passengers				10.0%	130,000	43%	9.0%	158,000	46%
Cruise Ship Passengers to New London	6.5%	715	0.3%	15.0%	320	0%			
Total/Cumulative	2.6%	233,559	100.0%	3.0%	303,320	100.0%	3.1%	344,000	100.0%
Nominal Attendance Range		234,000			303,000			344,000	
Budget Number for Operating Pro Forma		220,000			242,000			292,000	
Total Resident		49%			33%			32%	
Total Tourist		51%			67%			68%	

Table 12.10

Sources: As previously cited in this Addendum and previous reports

Attendance First Five Years of Operation

As noted above, opening year attendance trends can be altered by marketing and programming choices. For example, if limited funds are allocated in the capital budget to launch the Museum opening year, then the first-year attendance boost will not be as big as if the marketing launch were significant. Currently the marketing dollars allocated in the capital budget are minimal and on-going marketing expenditures post opening are modest. As a result the attendance boost for year one is very modest. Year two is projected to increase based on word of mouth and reviews on social media, assuming they are positive. Year three shows a decline as excitement and free publicity about the new Museum subside. The decline may not be as precipitous as shown here but some fluctuations in attendance are to be expected, often due to unexpected circumstances, including inclement weather. Year four is the stabilized year, as the Museum matures and staff and management have a better understanding of what makes the Museum successful. Year five assumes modest growth, provided tourism and ferry passenger ridership levels do not change significantly.

There are State and regional tourist organizations that will help promote the Museum, though those funds have been declining. The Museum will benefit, as all museums do, from word of mouth, its connection to Coast Guard personnel and families, and from its location, which will be highly visible to ferry passengers, train passengers, boaters and those using the city park or attending events at the park and waterfront.

Stable Year Attendance Potential by Market Segment: Medium Scenario
 National Coast Guard Museum

Year	2022	2023	2024	2025	2026
Target On-Site Attendance				344,000	
Budget On-site Attendance	321,200	335,800	277,400	292,000	297,840
Attd. Change over Stable Year	110%	115%	95%	100%	102%

Table 12.11

Source: White Oak Associates, Inc.

Museum Programming

National Coast Guard Museum

Addendum 2017 to Chapter 15



This chapter of the Museum's *Strategic Master Plan* (the *Plan*) describes the shared assumptions underlying the operating economic model related to the programs offered by the Museum to schools, general visitors and event rentals. “Programming” is what the Museum does day-to-day with the building and its exhibits; in the long run, programming is what draws repeat visitors and motivates membership, and sometimes grant funding, to support after-school workshops, for instance. This *Addendum '17* addresses only aspects that have changed enough to merit changes to the *Plan*.

For practical and economic reasons, it is useful to subdivide the Museum's audiences into *visitors*, who seek admission to the visitor experience, and *program participants*, who come specifically to engage in the Museum's scheduled programs.

While exhibits happen in space, programs happen in time, frequently scheduled. Programs enable the Museum to consistently reach and engage a more diverse set of audiences in the community.

On-site attendance includes both visitors and program participants counted by person-trips to the Museum's site. The motivation to make the trip is the distinction between visitors and program participants—did they come primarily for a visit or a program?

Any museum engagement that is not a visit is program participation. By this definition, board meetings, volunteer shifts, meetings with grant officers and event rentals are programs and the individuals attending them are program participants.

Changes Relative to Museum Programing

Audiences

- New work force is younger, more educated and wants to live downtown.
- New flexible program spaces mean the Museum can now serve residents.

Context

- Museums today place much more emphasis on the web and social media
- Funders focus more on programs with quantifiable social impact and less on legacy bricks and mortar
- Mr. James Butler, E.D., SE CT Council of Governments: Aging population. Plan of development plan on www.ccog.org. Just updated it. Young people leaving, not staying. Also leaving CT. Casinos attract a lot of immigrants, especially Asian Americans and Asians. They are moving to the region. Started 10-15 years ago. They have a lot of people living in the same house. Moving up to work at the casinos not to gamble. Folks moving in have English as second language. Schools adapting. 30 different dialects in Norwich. A lot more Latinos in NL now. NL used to have a lot of Puerto Ricans; now Dominicans and others.
- Synergy between the Museum and Academy important. Almost all officers come from the Coast Guard Academy. Not true for Navy. Sense of belonging is much stronger in the Coast Guard.

Program Ideas

- The new site and current program offer more for a membership program based on repeat visits.
- Total Net SF increased: There are enough new spaces that the Coast Guard and the Association can operate programming departments and yearly program schedules that may add value and generate net earned revenues.
- Outdoor Piers-need rental agreement with the city.
- Cutter in addition to the *Eagle*.
- Overnight programs on the visiting boats.
- Black box theater missing in New London. Complaint by local artists. 150-seat theater needed here.
- Teach the Academy students about heritage. Maybe a leadership symposium including those who didn't go to Academy.
- R & D and labs are here and ICE patrol headquarters. They are all at Ft. Trumbull. Have a vault at the labs. Have all the evidence in the vault and have oil DNA.
- Museum Education Initiative underway: STEM School Program; Qualifications Program and Virtual Shipmate.

Site

- Urban plaza for hosting festivals and events (exists inland of tracks).

Multipurpose and Flexible Spaces

The balance in the Museum between dedicated spaces, such as long-term exhibit galleries, and multi-purpose spaces, such as the Event Center, is a critical decision that affects the Museum's audiences, impacts and operations. This section recommends a balance that is reflected in the attendance and operating potentials.

Given the tight limits on space, an emphasis on designing and outfitting spaces for multiple functions makes sense for key spaces, and the planners suggest that the following spaces in the Architectural Program (see Chapter 20) be positioned and equipped as multi-purpose spaces, with the net effect of increasing the Museum's ability to offer programs for residents, particularly off-season:

- **Lobby** should be flexible enough to expand its food and retail operations during heavy summer traffic, and to contract to be used after hours and in the winter for receptions and community uses.
- **The Feature Theater** should be equipped with a projection screen and seating layout that heightens the signature film's experience over conventional movie houses. Secondly, the Theater should be able to operate as a lecture hall, community meeting space, evening award ceremonies and popular film series. Fixed, comfortable seating on a gentle ramp with elegant fixtures combined with a quality digital projection system and programming will dedicate this space to theater functions (no flat floor), but the programming (films, lectures, etc.) can change.
- **The Event Center and Outdoor Patio** should be able to operate in modes identified through market needs research and business analysis, which might include weddings, award ceremonies, ship reunions, receptions and dinners, corporate training, group programs, cadet ceremonies, off-season exhibitions, conventions, and others. The Event Center should be sub-divisible into program spaces at times, sharing a booking schedule with other operating modes. Research followed by business analysis should inform the infrastructure choices for the Event Center, as budgets will be very tight – what will be more important, bride/groom rooms with bathrooms? Or IT and media systems for business and academic meetings?
- **The Changing Gallery** should be convertible to program spaces and traveling exhibitions.
- **The STEM Learning Center** has specific spaces designed to add value to the Qualifications Challenges. As the design of these evolves, planners should weigh potential use by dedicated audiences against a suite of more flexible spaces that could serve more audiences. Independent access from either the elevators or the bridge may be important to evening and winter access when the rest of the Museum is closed.
- **The Early Learning Gallery**, run by the Association, will schedule programs for pre-K children and their caregivers, such as Storytelling and Theater Time. The Gallery can be reserved for birthday parties. The Gallery is closed on a schedule based on periods of low demand.
- **The Museum Galleries** should include program areas among the exhibits. A School group can gather in these clearings or hubs among exhibits.
- **The Whole Building** should be considered for seasonal operation and evening rentals.

Organization

Through education programs, the exhibits and public spaces of the institution will be enlivened and transformed by greeters, docents and staff educators interacting with program participants and visitors. The STEM Learning Center [working title] is NCGM's education department as well as a series of spaces in the new Museum and an array of Margin of Excellence Programs that enrich the Museum and its visitor experience.

The overall vision driving the Learning Center programs revolves around serving two primary audiences— individuals and groups. Each of these audiences will require specific and targeted program delivery strategies and approaches that, while complementary, are often quite distinct from one another. NCGM's Coast Guard staff will pay particular attention to serving the K-12 audience for free during opening hours. In time, the Association staff may offer fee-based programs after hours or in the Margin of Excellence spaces, but these are not in the economic model.

To achieve these objectives, the following areas of activity, budgeting and staffing have been defined:

People-to-People Programs

Group programs

Individual Programs

Margin of Excellence Programs

Each of these programs is discussed below. Some are *core*, and included in the economic model, and others are *incremental funding*. Coast Guard staff will operate the free programs, both in the Museum Galleries and in the Learning Center. Association staff may elect to run fee-based programs in the Learning Center after opening, but these are not in the economic model.

People-to-People Programs

People can make the Coast Guard real in a way that exhibits, brochures and books cannot. The Museum can play a role along with other partners in connecting the professional and amateur-Coast Guard community with learners, including students, teachers and families. By establishing a number of people-to-people programs and providing a variety of learning strategies, NCGM will encourage customers and visitors to become active, engaged learners. At the Museum, mentoring and social interactions will be encouraged through active duty guardsmen, volunteer, docent, and advisory programs.

Connecticut has a great asset in its active and retired Guardians who can provide motivated and experienced individuals. Managing this people-exchange will require careful scheduling, personal support and training of volunteers. This office will also serve as the Museum's volunteer office. The People-to-People staff will establish, organize, train and nurture NCGM's relationships with volunteers in several categories:

Coast Guard Welcome Team: Uniformed Coast Guard personnel will greet entering visitors and ask them about their visit as they leave. The presence of real Coast Guard personnel in uniform will put a human face on the service and allow youngsters a chance to ask questions about serving in the Coast Guard. Their presence will clearly symbolize whose museum this is.

For the service personnel, this posting is an excellent opportunity to develop public interface skills and to deepen their understanding of the Coast Guard's stories and values.

Docents (Volunteers) and Staff Support: This group represents the core volunteers who will interact with the visiting public and school group audiences in the visitor experience. Some of these will be trained as virtual shipmates (See Individual Programs).

Interns (Volunteer and Unpaid): Students will have opportunities to commit to a regular schedule (part-time, afternoons or weekends) and a job description. Kids can enroll because they want job experience, or for college credit or to log hours of community service.

Experts and Advisors (Volunteer) Ad hoc advisory committees and experts will be recruited to support the planning, development, and implementation of special projects, new exhibits and community events. The MEAP and MEI committees are examples.

Each of these categories will need training and support, in addition to scheduling and logistics. This can become very staff intensive. Volunteer time is not free to the institution, as staff is needed to make volunteers successful and happy.

Individual Programs

Floor Explainers (Docents)

A beautiful museum is not enough on its own, the building and exhibits must be accessible to a diverse group of visitors and encourage that unique interaction that will spark a keen interest. The key to unlock this curiosity and open the doors of discovery requires a human link between the exhibits and the visitor. NCGM Floor Explainers are the link that will bring the exhibits to life and foster the spirit of learning.

Floor Explainers are primarily volunteers (retired Guardians, students, and other adults or teens interested in the Coast Guard). Explainers will be trained by NCGM staff to help visitors fully experience the Museum. Everyone in this program will participate in an initial training session and ongoing content and process workshops. The Explainers will be NCGM's image to the public, instrumental in providing a pleasurable, educational and successful visit to the Museum.

The Explainers will be well versed in the content of exhibits and will be conversant with teaching techniques of interactive learning. In addition to interpretive responsibilities, Explainers add a "soft" security presence in the Museum.

Floor Demonstrations and Discovery Carts

Dynamic, engaging, safe and accessible demonstrations on topics that utilize and support the exhibits will enhance the exhibit visit. Short, informal demos will be presented periodically throughout the day to assembled groups or even on a one-to-one basis, as Explainers travel around the exhibit floor.

Group Programs

A school group visiting NCGM will be offered a brief orientation, time to explore the exhibits, a time slot to use the lunch area, and materials to fully integrate the experience into the classroom (the core group program). For an extra fee, school groups can register for special programs and materials.

To familiarize themselves with the facility and integrate the programs and exhibits into their curriculum, teachers will be encouraged to visit the Museum in advance of their field trips. Prior

to a field trip, "tips for NCGM Field Trips" and pre- and post-lessons and activities will be available to the teacher. In addition, teachers can printout on-line self-guided tours and exhibit explanations to use with their students and chaperones. With an advance reservation, NCGM will try to arrange for a volunteer explainer who can facilitate the school groups' experience.

Margin of Excellence Programs (Future Option)

Margin of Excellence Programs is responsible for developing and delivering educational programs that are grant- or fee-based, cover their own costs, and in certain cases, help the Museum. Arriving at the right mix of programs that serve a wide range of out-of-school audiences and use the time slots unfilled by schools will take time and flexibility. *Enterprise Programs* will be developed by the NCGM Association after opening for specific audience groups that are important to the mission of the Museum, including youth and families, home schoolers, youth groups, downtown residents and employees, community groups, professional audiences, adults, and a variety of government or private sector audiences.

Qualification Programs: Young visitors (tweens and teens) can collect points at designated units in the Museum Galleries. They can select among different qualifications paths: Aviator, navigator, etc.

Youth and Family Programs: will develop and offer a range of enrichment classes, workshops, and week-long camps for pre-school children, youth, and families covering a broad array of topics related to the Coast Guard and maritime activities. In addition, programs will be offered during school holiday periods when parents need structured experiences for their children. The burgeoning home school market will also provide opportunities to redeploy the existing repertoire of youth classes and activities.

Themed birthday parties will be offered to youth and will include time for the party group to explore the exhibits, a choice of an age appropriate hands-on workshop, and a short use of a learning center space as a birthday party room. These group parties have proven very popular and profitable.

Adult and Travel Programs will offer related lectures, classes, and domestic and international study tours, as well as day-long field trips for the adult community and the Museum's membership. In cultivating the adult audience, NCGM will actively promote partnerships with colleges, continuing education centers, and professional societies. NCGM might also collaborate with elder hostel programs or conference organizers to offer tours for spouses of conference participants.

Camp-Ins and Group Programs: Camp-Ins will be an intensive, fun, hands-on, overnight experience for youth groups. Campers will have the exclusive use of the Museum so they can explore the facility to their heart's content. They also have the opportunity to participate in specially designed hands-on workshops. Overnight camp-in programs have become very popular in museums nationwide. They provide a tremendous opportunity to increase the visitation and engage the young visitor. Girl Scout camp-in programs have been very successful educationally and financially lucrative for many museums.

Special Events and Programs Using the Whole Museum: Special Events can tie in with annual celebrations or be stand alone, one-time initiatives; used for general publicity, fund raising, soliciting community support and coordinating with regional festivities. Holiday and

special weekends will be designed to include parades, "waterfront conventions" or to coincide with exhibit openings. These events will be excellent opportunities to collaborate with discipline-based societies, and regional professional associations.

Community Programming

In time, the National Coast Guard Museum Association may offer a variety of Courses and Programs, but these are not in this Economic Model.

Youth Programs

Kids Sleepover Program
School Program Enhancements
Qualifications Program

Adult Programs

Lecture Series
Film Series
Community Events

Event Rentals

Meetings
Receptions
Reunions
Weddings

Spring and Summer Camps

Maritime Adventures Camp
Day Express Camp

Five Year Operating Profile

National Coast Guard Museum

Addendum 2017 update of Chapter 16 (Principal Operating Assumptions) and Chapter 24 (Five Year Operating Profile)

[See Attachment D for detailed departmental budgets.]

This chapter presents summary operating pro formas for the first five years of operations, currently estimated to be 2022 through 2026, based on the Museum opening to the public on Saturday, May 28, 2022, Memorial Day weekend. Budgets are based on full years and not a fiscal or calendar year. This *Addendum 2017* addresses aspects that have changed enough to merit changes to the 2008 *Master Plan* and *Addendum 2014*. In addition to increases in inflation since *Addendum 2014*, broadly, the changes reflect the new building size and the components that were put back into the program, as well as an updated staffing list.

Another change, regarding on-going renewal and improvements, reflects the current assumption that there will be no support from the Association in those areas after the Museum opens, except for Margin of Excellence programs. The Coast Guard will cover exhibit and equipment renewal and replacement. The assumption has not changed that facility maintenance and improvement costs will be funded by the Coast Guard once it assumes ownership of the building. The Association will cover all costs for its own operations and activities.

Overview

This report focuses on staffing and expenses that will be covered by the Coast Guard only, not the Association. Summary budgets are presented in Tables 16.7 and 16.8. Detailed departmental budgets appear in Attachment D of this *Addendum 2017*.

The operating budget focuses on expenses to operate the Museum and does not address potential revenue generating enterprises. The budget does not include operation and maintenance of the pedestrian bridge, which will be maintained by others, including the City of New London. In addition, no expenses are included for maintaining the piers, services or facilities pertaining to the *Eagle*, which are outside of the Museum budget.

Although the budgets are for just the Coast Guard it is important to understand the areas of responsibilities that will be handled by both the Coast Guard and the Association. Together they will provide a full visitor experience.

The Museum and the Association should have a high degree of interface and collaboration to ensure that the Association and the Museum are aligned in such areas as museum goals and strategies, branding, organizational culture and employee behavior for those who work on-site and interface with the public. This alignment should also extend to staff that are part of contracted services. The division of tasks between the Coast Guard and the Association is presented in Table 16.1.

There is some overlap in programming and space usage. The two organizations will need to work together and share scheduling software to avoid conflicts.

Departments and Responsibilities by Organization
National Coast Guard Museum

USCG	Association
Admin, Finance and Human Resources	Development and Fundraising
Community Liaison and Public Relations	Marketing and Advertising
Programs, Events and Theater	Programs and Theater
Exhibits, Education, Heritage Asset Collections	Special Events and Evening Initiatives
Volunteers	Gift Shop and Food Service
Visitor Services	Function Rentals and Catering
Facility, Grounds and Security	Exterior Campus (e.g. bringing ships in)

Table 16.1

Source: White Oak Associates, Inc.

Adjustments to the Plan

Architectural Program and Components

The architectural program has changed since the 2008 *Master Plan* and *Addendum 2014* and is still in flux. The version of the Schematic program which White Oak Associates reviewed for this *Addendum 2017*, in regard to operations, was issued by the architects in December 2017. Based on the total net and gross square footage in that Schematic design, White Oak Associates developed its own detailed version of the architectural program with recommended space allocation among the components and venues, which was used as the basis for the operating budgets presented in this chapter. (See Chapter 20, “Architectural Program.”)

Architectural Changes

Key components of White Oak Associates’ architectural program that have an impact on the Museum’s operating budget are presented in Table 16.2, as are prior assumptions from the 2008 *Master Plan* and *Addendum 2014*.

The building has increased both in net and gross square footage. The exhibit galleries are smaller by 975 SF, but in addition there is now a 1,500 SF area for an Early Learning Center for young children. The Feature Theater, with a signature film, has been put back into the program as well as a room where classes can be held, now called the STEM Learning Center. These are all positive changes that will improve the visitor experience and increase attendance.

In the evenings, when the signature film is not being shown, the Feature Theater can host lectures, programs and show other films, whether organized by the Coast Guard or the Association.

A simulator is back in the program, which will be incorporated into the STEM Learning Center. The simulator is no longer a “jiggle box” or cabin simulator, as was imagined in the 2008 *Plan*. It will be more like an exhibit. This is a better answer as a simulator cabin would have taken up too much space and requires more resources to run it. This approach allows for multiple simulation exhibits.

The gift shop public area is larger than in *Addendum 2014*, which is beneficial. There is no longer a Café, though some level of light food service will be offered.

There is still a dedicated Event Center with adjacent catering space on the top floor overlooking the Thames River. This is an ideal space for functions and special events. The space has the potential to be used for other purposes as well, such as temporary exhibits or classes in seasons when function rentals are not as popular.

Administrative space has been increased and can now accommodate all staff on-site. This is by far the best solution, is more cost efficient and will promote collaboration among all staff. In *Addendum 2014* the administrative space was not large enough to accommodate all staff on-site and an off-site office was to be leased.

Off-site space is still needed for storage, which has been budgeted at 4,000 SF. The off-site rental in *Addendum 2014*, which was for staff and office needs, totaled 2500 SF.

Comparison of Architectural Assumptions: 2008, 2014 and 2017
National Coast Guard Museum

Category	2008 Master Plan	Addendum 2014	Addendum 2017
Net Building SF	44,170	41,800	50,550
Gross up Building SF	17,668	12,500	17,775
Total Building Square Footage (Gross)	61,838	54,300	68,325
Off-site Space for Offices ('14) or Storage ('17)	-0-	2,500	4,000
Exhibit Galleries Square Footage (Net)	22,170	26,400	25,425
Changing Exhibit Gallery (in total Exh SF)	not delineated	not delineated	[1500]
Early Learning Center	-0-	-0-	1,500
STEM Learning Center/Classrooms	2,055	-0-	4,600
Multi-purpose and Event Space w. Catering SF	-0-	5,400	4,355
Court of Honor SF	2,400	-0-	-0-
Administrative Space On-Site	3,205	1,800	3,415
CG Live! SF (Public Space)	900	-0-	-0-
Lecture Hall Seating	75	120	see thtr
Feature Theater SF	5,050	-0-	3,200
Feature Theater Seating	150	-0-	150
Simulation Center	1,000	-0-	in STEM Ctr
Museum Store Public Retail Area	1,500	1400 w/food	1,800

Table 16.2

Source: White Oak Associates, Inc.

Operating Hours

Assumptions regarding operating hours have changed since the 2008 *Master Plan* and *Addendum 2014*. One change is which holidays the Museum will be closed. Instead of Christmas and New Year's Day the Museum will be closed on Christmas and Thanksgiving. Both the Mystic Aquarium and the Mystic Seaport are open on New Year's Day.

Previously the assumption was that the Museum would be closed on Mondays from November through February. This has been modified to extend Monday closures to the general public in March, but the Museum will still be open those Mondays for school and other groups.

The Museum will be open to the general public seven days a week during the summer months of June, July and August (the “peak or high period”) as well as during the “shoulder” season months of April, May, September, and October. Peak school visitation will be in the spring.

This results in the exhibit galleries and Museum being open to the general public 344 days per year with an additional four Mondays for school and other groups. The Museum will also be open at night for special events, function rentals and other special activities.

Another change is to hours open to the public during the day. The low season will have shorter public hours, 10:00-4:00. The Museum will be open from 9:00-5:00 in the shoulder and peak seasons.

Table 16.3 calculates the number of days open and the hours needed for one security and custodial staff person and one seasonal gallery interpreter to cover the hours. Custodial will cover 363 days and security 365 days.

Operating Hours: Floor Staff Interpreters and Greeters
National Coast Guard Museum

	Attendance Season	Days Open	Public Hours	Floor Staff Hours	Days	Staff Hours	Total Hours
<i>Closed Thanksgiving and Christmas</i>							
November	low	Tues-Sun	10 to 4:00	9 to 5:00	25	7.5	188
December	low	Tues-Sun	10 to 4:00	9 to 5:00	25	7.5	188
January	low	Tues-Sun	10 to 4:00	9 to 5:00	27	7.5	203
February	low	Tues-Sun	10 to 4:00	9 to 5:00	24	7.5	180
March	low	Tues-Sun	10 to 4:00	9 to 5:00	27	7.5	203
March (school grps.)	low	Mondays	10 to 4:00	9 to 5:00	4	7.5	30
Holidays	low	Mondays	10 to 4:00	9 to 5:00	2	7.5	15
April	shoulder	Mon-Sun	9 to 5:00	8:30 to 5:30	30	8.5	255
May	shoulder	Mon-Sun	9 to 5:00	8:30 to 5:30	31	8.5	264
June	high	Mon-Sun	9 to 5:00	8:30 to 5:30	30	8.5	255
July	high	Mon-Sun	9 to 5:00	8:30 to 5:30	31	8.5	264
August	high	Mon-Sun	9 to 5:00	8:30 to 5:30	31	8.5	264
September	shoulder	Mon-Sun	9 to 5:00	8:30 to 5:30	30	8.5	255
October	shoulder	Mon-Sun	9 to 5:00	8:30 to 5:30	31	8.5	264
					348	112	2824
Evening hours for one security guard FTE					365	16	5840
Day hours for one security guard FTE					365	8	2920
Custodial hours					363	8	2904

Table 16.3

Source: White Oak Associates, Inc.

Table 16.4 calculates total salaries or fees needed to cover all hours based on the estimated number of FTEs and total hours. The budget covers having one gallery interpreter and one security guard on each exhibit floor plus guards and a greeter at the entrance. In the peak summer months three additional floor staff have been added. It is assumed that security will have one person on at night after hours and before the Museum opens to the public. The budget covers both armed and unarmed security guards. For special evening events additional security

will need to be added. If the event is under the management of the Association they will need to pay for the added security.

Custodial work should be staggered in time with some on duty during the day and the majority coming in after Museum public hours.

Calculation of Hours and Fees: Floor Staff/Greeters, Security and Custodial
National Coast Guard Museum

Floor Staff:	FTE Hours	Hours to Cover Shifts	FTEs Needed	Salary w. Benefits
Salary per 1 FTE including Benefits				\$47,932
Year Round Coverage:				
FTEs needed to cover all hours	2080	2824	1.35	\$64,708
FTEs needed for 4 people on floor per shift		11296	5.40	\$258,833

Seasonal Summer Contract Labor - Greeters					
	Hourly w. benefits	# People	Hours	FTEs Needed	Annual \$
Rate 1 FTE	\$23.04	1	2080		\$47,932
Seasonal hours		1	782	0.38	\$18,021
Cost for 3 people	\$23.04	3	2346	1.13	\$54,062

Contract Labor				
	Hourly Rate	# People	Hours	Fees
Security				
Armed day	\$51.84	2	2920	\$302,746
Unarmed day	\$41.47	4	2920	\$484,370
Armed night	\$51.84	1	5840	\$302,746
Total Security				\$1,089,861
Custodial	\$18.87	2.5	2904	\$136,996
Grounds	\$18.55	2.0	2904	\$107,738
Total Grounds/Custodial				\$244,735

Table 16.4

Source: Coast Guard Hourly Wages WDR 2015-4111 Rev 3 updated 5/8/2017 and White Oak Associates, Inc.

Staffing

(Also see Chapter 23, "Staffing", for a detailed list of staffing and salaries.)

Salary and benefit costs are in 2017 dollars and are based on the FY17 annualized Standard Personnel Costs (SPC) methodology, per the Excel document, provided by the Coast Guard Office of Budget Development for Operations, entitled, FY17_SPC_Memo_POSTED.xlsx.

As recommended by the Coast Guard, new hires are budgeted at Step 10. In the 2008 *Plan* and *Addendum 2014* salaries were derived from the GS locality pay scales for the Hartford-Willimantic, CT area and cross referenced against museum industry association salary surveys and salary data from museum 990 tax returns. Previously benefits were calculated at 26% for full-time employees and 13% for part-time. The new staffing salaries include benefits in the hiring assumptions.

Hourly rates for custodial and grounds personnel were taken from the document, Hourly Wages WDR 2015-4111 Rev 3 updated 5/8/2017 and posted 5/16/2017. Health and welfare costs of

\$4.27, as shown in the same document, were added to the hourly rate. The rates were for the New London area.

Staff levels in this *Addendum 2017* are at optimal levels to provide a first class experience.

Expenses

Annual expenses were updated to 2017 dollars and costs were adjusted to reflect the current size and components of the building and new programs added.

A new department budget was added for the Deputy Director, who will be managing internal operations.

A department budget was added for the Feature Theater.

The budget for the off-site office was updated to reflect the larger size and its use, primarily, for storage as opposed to off-site staff.

Assumptions Behind the Five Year Operating Budgets

The operating budgets for the first five years of operation are based on the following assumptions:

- A Museum opening date of May 28, 2022, Labor Day weekend and a stable or normalized operating year in 2025, four years after opening. A stable year is one in which attendance trends are related more to programming choices and marketing than the excitement surrounding a new facility in the first years after it opens.
- The Museum will be a facility under the budget of the Coast Guard as opposed to a separate non-profit 501c (3) museum.
- The budgets and staffing reflect the vision, components and programs for the Museum as described in the 2008 *Master Plan* and as amended in this *Addendum 2017*.
- All budgets are based on a cash basis rather than an accrual basis and are based on a full year of operations, including year one.
- Museum operations will be carried out annually by both the Coast Guard and the Association, each funding their own initiatives and programs.
- Funds from any earned and support revenue managed by the Association will be kept and maintained by the Association.
- Dollars for the summary operating budgets are shown in 2017 dollars and in inflation-adjusted dollars.
- The core operating budget does not include any depreciation for the building, machinery, equipment, or furniture and fixtures, but line items for nominal annual renewal and maintenance are included in the facility and exhibit and program budgets. Separate calculations, including building life cycle costs, are provided for future improvement and capital needs.
- The operating budget assumes capital funding at the levels indicated in Chapter 26, "Capital Budget and Pre-Opening Operating Costs."

- The operating budget assumes there will be no operating debt carried over from the Capital Campaign that will be taken on by the Coast Guard.
- The salaries include benefits and are based on 32.40 FTEs.
- Attendance Potential Estimate: (See Chapter 14, “Market and Attendance Update”.) Total on-site attendance potential is presented in Table 16.5 Opening years one and two are expected to have higher attendance than in “stable” year four, reflecting industry trends after opening a new museum. The planners believe this trend will be less pronounced for the Museum as the marketing launch budget for the project is extremely modest. Word of mouth among the Coast Guard community and residents may play a greater role in promoting attendance in the first five years of operation as will visibility to those arriving or departing New London by ferry, rail or bus.

Note that an attendance potential of 292,000 on-site visits is used for budgeting purposes and reflects a 15% decrease from the attendance potential of 344,000 on-site visitors indicated in Chapter 14. It is recommended that 292,000 be the attendance number shared with the public and media, stating it is for a stable of year of operations and that the opening years are expected to have higher attendance.

Attendance Potential Budget Level for Operating Budget

National Coast Guard Museum

	2022	2023	2024	Stable Yr. 2025	2026
Total On-Site Attendance	321,200	335,800	277,400	292,000	297,840
Increase over Stable Year 4	110%	115%	95%	100%	102%

Table 16.5

Source: White Oak Associates, Inc.

Adjustments for Inflation

Table 16.6 presents inflation-related assumptions. Expenses were adjusted for inflation since the 2008 *Master Plan* and are based on an increase of 1.16, the Consumer Price Index inflation rate between 2008 and 2017 at the time the budgets were developed.

Energy costs are based on Coast Guard guidelines of .5% of construction costs, which as indicated in the capital budget in Chapter 26, total \$69,200,000.

The inflation-adjusted summary operating budget is based on the following annual rates increases:

- 1.9% applied to staff salaries, as recommended by the Coast Guard. This reflects a 1.4% general increase plus a .5% additional increase for the Hartford area
- 5.0% applied to the facility department
- 2.5% applied to non-staff costs, except for the facility department

Inflation Assumptions
National Coast Guard Museum

	Rate
Energy Costs as % of Construction Costs	0.005
Inflation Rate 2008 to 2017	1.16
Inflation Rates for Budgets in 2022\$ to 2026\$	
Inflation Rate after 2017 - Personnel	1.9%/year
Inflation Rate after 2017 - Utilities/Facilities	5%/year
Inflation Rate after 2017 - All Other Non-Staff Items	2.5%/year

Table 16.6

Source: White Oak Associates, Inc.

Five Year Summary Operating Statements

Tables 16.7 and 16.8 present the five year operating budget in 2017 dollars and in inflation-adjusted dollars.

The budgets include recurring facility maintenance and modest annual exhibit and program change. Major building repairs and capital needs and exhibit renewal will be funded outside of the operating budget and are shown in Table 16.10.

Annual expenses, rounded and in 2017 dollars, range from \$5.9 million, opening year one, to \$6.2 million in year four. Stable year four expenses round to \$7.9 million in inflation-adjusted 2025 dollars.

Year one will have some savings assuming equipment and other items will be covered by warranties and/or were covered in the capital budget.

Museum Summary Operating Budget (2017\$)
National Coast Guard Museum

NCGM Budget 2017\$	Future Yr 1	Year 1 2022	Year 2 2023	Year 3 2024	Stable Yr 4 2025	Year 5 2026	Yr 4
<i>On-Site Attendance</i>		321,200	335,800	277,400	292,000	297,840	
EXPENSES							
Salaries and Benefits	52%	\$3,079,535	\$3,079,535	\$3,079,535	\$3,079,535	\$3,079,535	50%
Visitor Services & Programs	5%						7%
Exhibits and Programs	3%	\$163,900	\$263,866	\$313,866	\$328,866	\$323,866	5%
Feature Theater	0%	\$24,600	\$35,600	\$35,600	\$35,600	\$35,600	1%
Visitor Services	2%	\$93,400	\$84,273	\$79,273	\$89,823	\$86,273	1%
Overhead & Support	43%						43%
Admin & Finance	1%	\$47,850	\$50,300	\$50,300	\$50,300	\$50,300	1%
Information Services	2%	\$145,000	\$172,550	\$172,550	\$190,550	\$172,550	3%
Director's Office	1%	\$55,200	\$54,800	\$54,800	\$54,800	\$54,800	1%
Deputy Director's Office	1%	\$34,200	\$32,800	\$32,800	\$32,800	\$32,800	1%
Community Relations	4%	\$218,150	\$174,500	\$174,500	\$189,250	\$189,250	3%
Off-site Storage	2%	\$129,778	\$128,578	\$127,378	\$126,178	\$124,978	2%
Facilities	32%	\$1,917,449	\$1,988,733	\$1,988,733	\$1,998,733	\$1,988,733	32%
TOTAL OPERATING EXPENSES	100%	\$5,909,062	\$6,065,535	\$6,109,335	\$6,176,435	\$6,138,685	100%
Totals Addendum 2014 (2013\$)		\$2,863,963	\$3,047,937	\$3,104,673	\$3,114,673	\$3,289,683	
Totals 2008 Master Plan (2008\$)		\$2,352,501	\$2,609,654	\$2,598,561	\$2,721,008	\$2,895,700	

Table 16.7

Source: White Oak Associates, Inc.

**Museum Summary Operating Budget
INFLATION-ADJUSTED DOLLARS**
National Coast Guard Museum

Inflation Rate - Personnel		1.10	1.12	1.14	1.16	1.18	
Inflation Rate - Facility Costs		1.28	1.34	1.41	1.48	1.55	
Inflation Rate Other Costs	Yr	1.13	1.16	1.19	1.22	1.25	Yr
	1	2022	2023	2024	2025	2026	4
Inflation Adjusted NCGM Budget		Year 1	Year 2	Year 3	Year 4	Year 5	
		2022	2023	2024	2025	2026	
<i>On-Site Attendance</i>		321,200	335,800	277,400	292,000	297,840	
EXPENSES							
Salaries and Benefits	49%	\$3,383,421	\$3,447,706	\$3,513,213	\$3,579,964	\$3,647,993	45%
Visitor Services & Programs	5%						7%
Exhibits and Programs	3%	\$185,438	\$306,004	\$373,088	\$400,692	\$404,465	5%
Feature Theater	0%	\$27,833	\$41,285	\$42,317	\$43,375	\$44,460	1%
Visitor Services	2%	\$105,674	\$97,731	\$94,231	\$109,441	\$107,743	1%
Overhead & Support	46%						47%
Admin, HR & Finance	1%	\$54,138	\$58,333	\$59,791	\$61,286	\$62,818	1%
Information Services	2%	\$164,054	\$200,105	\$205,108	\$232,167	\$215,491	3%
Director's Office	1%	\$62,454	\$63,551	\$65,140	\$66,768	\$68,438	1%
Deputy Director's Office	1%	\$38,694	\$38,038	\$38,989	\$39,964	\$40,963	1%
Community Relations	4%	\$246,817	\$202,367	\$207,426	\$230,583	\$236,347	3%
Off-site Storage	2%	\$146,832	\$149,111	\$151,412	\$153,736	\$156,080	2%
Facilities	36%	\$2,447,205	\$2,665,092	\$2,798,347	\$2,953,039	\$3,085,177	38%
TOTAL OPERATING EXPENSES	100%	\$6,862,559	\$7,269,323	\$7,549,061	\$7,871,012	\$8,069,965	100%

Table 16.8

Source: White Oak Associates, Inc.

Comparison of Current and Previous Museum Budgets

Anticipated Coast Guard appropriation for the Museum is higher than in prior reports. The largest increase in costs is related to staff.

Major reasons for the increases reflect:

- Three years of inflation since *Addendum 2014*.
- A building that is 14,000 GSF and 8,750 NSF larger than in *Addendum 2014*.
- Utility costs now use the Coast Guard guideline of .5% of construction costs, which increased the amount of utility operating costs.
- A higher number of staff, some increases in grade levels, and using Step 10 rather than Step 5 of the Coast Guard hiring guidelines.
- Department budget added for the Deputy Director.
- Additional security staff added to include 24/7 coverage.
- Contract labor for seasonal gallery interpreters/greeters added during the peak attendance months in the summer.
- Off-site facility size increased.
- Expenses increased for IT department.
- Expenses added to support programs in the STEM Learning Center. *Addendum 2014* did not include classrooms and a learning center.
- Modest funds added to run the signature film in the Feature Theater and funds for lectures or other programming in the space. *Addendum 2014* did not include a Feature Theater.

Table 16.9 compares staff and non-staff expenses among the 2008 *Master Plan*, *Addendum 2014* and *Addendum 2017*. Prior years were inflation-adjusted to 2017 dollars using the annual CPI inflation-rate for non-staff costs and, for staff costs, using the federal GS historical pay increases adjusted for the Hartford locality. (Also see inflation-adjustment in Chapter 23, "Staffing.")

**Comparison of Stable Year Four Operating Expenses
(Inflation-Adjusted to 2017 Dollars)**

National Coast Guard Museum

	2008 <i>Master Plan</i>	<i>Addendum 2014</i>	<i>Addendum 2017</i>
Staff	\$ 2,091,522	\$ 2,264,311	\$ 3,079,535
Non-Staff	\$ 1,444,782	\$ 1,506,790	\$ 3,096,900
TOTAL	\$ 3,536,304	\$ 3,771,101	\$ 6,176,435

Table 16.9

Source: White Oak Associates, Inc.

Renewal and Facility Improvements

Table 16.10 presents expenses that might be incurred outside of the operating budget. The assumption is that in years four and five 2,500 SF of exhibits will be renewed and that computers

will be replaced in year four. As a planning tool moving forward, White Oak recommends that the Museum develop a 5-year improvement plan for exhibit, equipment and facility renewal and that the plan be updated yearly. In addition to specific 5-year plan needs identified in Table 16.10, the Museum should plan for long-term building life cycle needs. (See "Building Life Cycle Costs" below.) The improvement plan, both 5-year and long term building life-cycle, should identify where funding for the costs will come from, whether operating expenses (OE) or acquisition, construction and improvement (AC&I) Funds.

**5-Year Museum Improvement, Replacement and Renewal Budget
Outside of the Operating Budget and Excluding Facility Improvements**
National Coast Guard Museum

2017\$	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 1 2026
Additional Non-recurring Appropriations	Year 1	Year 2	Year 3	Year 4	Year 1
Computer Replacement				\$66,000	
Equipment, F&F Replacement		\$10,000	\$20,000	\$20,000	\$30,000
Exhibit Renewal Plan		\$100,000	\$250,000	\$1,062,500	\$1,062,500
TOTALS (2017\$)	\$0	\$110,000	\$270,000	\$1,148,500	\$1,092,500
TOTALS (2025\$)	\$0	\$147,411	\$379,917	\$1,696,858	\$1,694,826

Table 16.10

Source: White Oak Associates, Inc.

Building Life Cycle Costs

The building systems and other design features such as roofing materials, flooring, etc. have not yet been specified so a detailed building renewal and maintenance forecast is not possible. At this stage of planning, a reasonable approach is to assume 2% of building construction costs per year. This is based on a 50-year life cycle of the building.

The Coast Guard will have its own guidelines for building maintenance and improvement. The following is a sample description from a similar museum project in which, once the museum opened, a city took ownership of it. In that project, the city requirements are to "continuously, actively and diligently keep, inspect, repair and maintain in good order and condition the facility and all structures, buildings, improvements, fixtures and machinery." In the case of the Coast Guard Museum, maintenance of the grounds and the bulkhead would be added.

As of the date of this *Addendum 2017*, the building construction cost is \$69,200,000 million. Excluding inflation, two percent calculates to \$1.384 million annually. Over a 50-year life cycle of the facility, the total is \$69.2 million in 2017 dollars. In reality, costs will vary per year as do life cycle years for different components and systems. For example, carpets may have an eight to ten year life cycle, depending on the quality of the carpet installed and the traffic effecting wear and tear. A roof may have a 20-year warranty and then need to be replaced. HVAC control and lighting systems may have a 20-year or better life cycle, however, with technology and efficiency improvements it may be advisable to replace earlier.

It is recommended that the Coast Guard work with the architects on developing estimated life-cycle costs once Design Development is complete or enough detail is available to undertake a more detailed cost analysis. The government has guidelines on how those costs should be calculated, which are more complicated than the two percent method.

Costs to maintain the bulkhead are the responsibility of the Museum. The architects anticipate no costs for decades. With coastal storm damage occurring at unprecedented levels this assumption should be periodically reviewed. At the same time, the 50-year building life cycle costs are based on construction costs that include the bulkhead.

Comparison to Peers

In Tables 16.11 and 16.12 the total building square footage for the Museum includes the off-site offices.

Comparison to US Science Centers

In many ways the Museum is most similar to science centers as it will have interactive exhibits as well as collections on display. Interactive exhibits are more costly to operate as they require more maintenance.

In comparing the Museum's operating profile against established science centers the caveat is that there will always be anomalies. In the case of the Museum there are more than usual. The ASTC museums have staff and expenses that are associated with activities that will be carried out by the Association, but the Association staff and non-staff costs are not reflected in the National Coast Guard Museum's numbers.

Table 16.11 compares the Museum's stable year operating budget (2017\$) to the median and average data for 19 to 22 US science centers with exhibit square footage of 20,000 to 46,000 SF. The data is derived from the 2016 member survey conducted by the Association of Science-Technology Centers (ASTC).

The Museum's stable year operating budget is almost \$6.2 million, higher than the average for the ASTC group, which was \$4.9 million in 2016\$. The highest operating expense among the surveyed museums was \$15.9 million.

The ratio of expenses per visit calculates to \$21.15 at the Museum, between the median of \$18.34 and the average of \$21.03 for the ASTC museums.

In comparison to the ASTC data, the Museum's staffing levels are low, but the staff count for the Museum does not include Association staff with similar responsibilities covered by staff at the ASTC museums. The Museum staff also does not include security and custodial, as they are contracted out. It is unknown how they are handled at the museums in the survey, which varies per museum. The National Coast Guard Museum also does not need cashiers and ushers that would be included at the ASTC museums.

The ratio of on-site visits per full-time equivalent (FTE) staff at the Museum is high, but some of that can be attributed to Association staff not being included in the total staff count.

Attendance at the National Coast Guard Museum is higher than for the survey respondents. The reason for this is that the Museum is free and the other science centers charge admission. Being free normally provides a tremendous boost to attendance.

**Comparison to Association of Science-Technology Centers
(Science Centers with 20,000-46,000 SF of Exhibit Galleries)**
National Coast Guard Museum

2016 ASTC Survey Data and NCGM Model	2016\$ ASTC Median	2017\$ Year 4 USCG Museum (No NCGMA)	2016\$ ASTC Average	2016\$ ASTC Minimum	2016\$ ASTC Maximum
U.S. Science Centers Exhibit 20k to 46k SF # of Respondents	19-22		19-22	19-22	19-22
Total Sq. Footage	69,350	72,325	86,660	30,000	203,851
Exhibit Sq. Footage	30,000	25,425	32,096	20,000	45,151
Total On-site Attendance	172,913	292,000	225,651	40,000	561,398
Students in Groups served on-site	25,821	10,000	32,932	4,834	80,567
Percent charging Admission	100%		100%	100%	100%
Percent with no Admission Fee	0%		0%	0%	0%
Adult Tx Price	\$12.00	free	\$13.08	\$8.00	\$21.95
Operating Expenses	\$3,168,695	\$6,176,435	\$4,906,584	\$464,602	\$15,856,536
Personnel Expenses	\$1,731,087	\$3,079,535	\$2,680,835	\$279,316	\$9,000,748
Personnel Exps. % of Total Exps	57%	50%	57%	39%	79%
Cost / Bldg SF	\$44.77	\$85.40	\$54.14	\$11.69	\$116.03
Cost/ Visit	\$18.34	\$21.15	\$21.03	\$9.94	\$33.09
FTEs (Employees)	33.00	32.40	50.00	12.00	153.00
On-site Visits per FTE	3,978	9,012	4,329	2,606	6,778

Table 16.11

Source: Data is derived from 2016 ASTC Science Center Statistics, Copyright © Association of Science-Technology Centers, Washington, DC, www.astc.org and White Oak Associates, Inc.

Comparison to a Selection of Military Museums

Data in the Table 16.12 compares the National Coast Guard Museum's year four operating budget to data for five military museums. Their data were taken from the most recent Department of Defense (DoD) report to Congress, "Operation and Financial Support for Military Museums." The most recent report was for FY 2013. The 2013 data for both personnel and non-staff cost were inflation-adjusted to the year 2017 using the government CPI inflation rate of 1.06.

The Museum's operating expenses will be covered by appropriated federal funds as are the operating expenses for the DoD museums in Table 16.12. The DoD military museums receive appropriated funds through Operations and Maintenance, Military Personnel, Military Construction, and Procurement Appropriations.¹ None of the DoD museums in Table 16.12 received non-appropriated federal funds in the DoD report for fiscal year 2013.

The data for the military museums vary considerably, which makes it difficult to compare to the National Coast Guard Museum. The information is provided mostly as a point of reference. Though not a "national" museum, the Submarine Force Museum and Nautilus was included since they are in Groton, CT across the river from New London.

¹ DoD Operation and Financial Support for Military Museums, Fiscal Year 2013 Report to Congress

Funds for facilities identified in Table 16.12 are for both sustainment (Operations and Maintenance) and recapitalization. There is no further breakdown so it is not possible to tell what portion of the funds was for operation or recapitalization. The facility line item for the Coast Guard Museum includes the three expense line-items for building-related maintenance and repair that are in the facility department operating budget. (See departmental budget in Attachment D). Because of the mixing of the operating and maintenance and improvement funds, two totals are shown, one excluding facility costs and one including facility costs.

Additional funds for the DoD Military Museums come from “other sources,” which are provided by private support organizations or other entities outside the federal government. Other sources might include donations, gifts and gift shop sales. Those were excluded from the ratios in order to more accurately compare DoD funding to future estimated Museum funding, which does not quantify the value of support from the Association programs to be delivered at the Museum. The other sources of funds received by the DoD museums ranges from \$88,000 at the US Navy Submarine Force Museum and Nautilus to over \$1.5 million at the National Naval Aviation Museum and the National Museum of the Marine Corps.

Funding and Ratios Excluding Facility Funds

After adjustment for inflation, DoD appropriations excluding facility funds and other funding sources, range from \$1.5 million, at the older and long established National Museum of the US Navy, to over \$10 million at the National Museum of the US Air Force. The National Museum of the Marine Corps’ funding is \$8.8 million. The latter two museums are substantially larger organizations.

Expenses per visit, excluding facility costs and other sources of funds, for the military museums range from \$3.14 to \$ 23.89 compared to \$20.68 at the Coast Guard Museum. Federal funding per building square foot ranges from \$5.52 to \$91.23. The Museum’s ratio is \$83.50.

Funding and Ratios Including Facility Funds

After adjustment for inflation, DoD appropriations including facility funds but excluding other funding sources, range from \$2.5 million, at the older and long established National Museum of the US Navy, to almost \$13.7 million at the National Museum of the Marine Corps and \$14 million at the National Museum of the US Air Force.

Expenses per visit, including facility costs and excluding other funding sources, for the military museums range from \$4.09 to \$ 28.75 compared to \$21.15 at the Coast Guard Museum. Federal funding per building square foot ranges from \$7.20 to \$97.78. The Museum’s ratio is \$85.40.

Selected Military Museums Funding and the Museum Year Four (2017\$)
National Coast Guard Museum

	Nat'l Museum of the US Navy Navy Yard, D.C.	Nat'l Museum of the US Air Force Air Force Dayton, OH	Nat'l Naval Aviation Museum Navy Pensacola, FL	Nat'l Museum of the Marine Corps Marine Quantico, VA	US Navy Submarine Force Museum and Nautilus Navy Groton, CT	Nat'l Coast Guard Museum USCG New London, CT
Federal and Other Funding 2013 DoD Report						
	DoD Report 2013\$ inflated to 2017					Year 4 in 2017\$
Funding						
Non-Personnel	\$158,470	\$543,849	\$365,462	\$3,526,565	\$288,908	\$2,959,617
Civilian Pay	\$1,323,813	\$9,748,569	\$2,045,311	\$4,658,182	\$542,329	\$2,656,469
Military Personnel	\$0	\$0	\$0	\$606,193	\$2,468,824	\$423,066
Non-appropriated Fund Instrumentalities	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Federal Funds	\$1,482,283	\$10,292,418	\$2,410,773	\$8,790,939	\$3,300,061	\$6,039,152
Military Construction Facility (O&M and recapitalization)	\$0	\$0	\$0	\$0	\$0	\$0
	\$997,035	\$3,696,565	\$730,392	\$4,933,744	\$236,871	\$137,284
Total Federal Funds	\$2,479,318	\$13,988,982	\$3,141,165	\$13,724,683	\$3,536,932	\$6,176,435
<i>Total Federal Funds in 2013 dollars</i>	<i>\$2,338,979</i>	<i>\$13,197,153</i>	<i>\$2,963,363</i>	<i>\$12,947,814</i>	<i>\$3,336,728</i>	
Personnel						
Civilian FT	13	96	28	44	6	21.0
Civilian PT	-	-	-	-	-	7.4
Armed Forces FT/ USCG	-	-	-	10	26	4.0
Armed Forces PT	-	-	-	-	-	-
Volunteers FT	-	3	2	-	-	n/av
Volunteers PT	18	545	358	218	54	estimate 50
Ratios						
Attendance	107,652	1,015,210	768,726	477,412	138,144	292,000
Federal Funding per Visit (no Facility)	\$13.77	\$10.14	\$3.14	\$18.41	\$23.89	\$20.68
Federal Funding per Visit (with Facility)	\$23.03	\$13.78	\$4.09	\$28.75	\$25.60	\$21.15
Number of Buildings	2	15	6	11	2	2
Bldg Sq. Footage	98,582	1,185,451	436,461	261,802	36,172	72,325
Federal Funding per SF (no Facility)	\$15.04	\$8.68	\$5.52	\$33.58	\$91.23	\$83.50
Federal Funding per SF (with Facility)	\$25.15	\$11.80	\$7.20	\$52.42	\$97.78	\$85.40
Other Funding Sources	\$485,480	\$99,638	\$1,560,320	\$1,529,888	\$88,404	\$0
Total Funding: Approp. and Other	\$2,964,798	\$14,088,620	\$4,701,485	\$15,254,571	\$3,625,336	\$6,176,435

Table 16.12

Source: White Oak Associates and the Department of Defense - Operation and Financial Support for Military Museums: Fiscal Year 2013 Annual Report to Congress

Risk Mitigation

It will be important that there is clear communication and that Museum staff and Coast Guard and Association personnel work towards common, shared goals.

Risks include internal support that varies depending on current command, which changes every four years.

If attendance does not reach its potential or if expenses are higher than anticipated, the Museum could trim staff. The staffing has been budgeted at an optimal level to handle the attendance potential.

The operating budget presented in this *Addendum 2017* reflects the assumptions in other chapters of this report. If the assumptions change then the budget needs to be updated to reflect those changes. For example, updates should be done if there are major changes in the architectural program, the exhibit plans, the Museum's components, the market environment, and/or the capital budget.

Earned Revenue Opportunities

National Coast Guard Museum

*Addendum 2017 update to
Chapter 17 (Mission Expanding Retail Services), Chapter 18 (Café and Food Service),
Chapter 19 (Function Rentals and Catering), Chapter 21 (Membership)*

This chapter now combines several earned revenue areas of the Museum's 2008 *Master Plan*. This *Addendum 2017* addresses aspects that have changed enough to merit changes to the *Plan*.

Changes Relative to Earned Revenue Programming

National Coast Guard Museum

Category	2008 <i>Master Plan</i>	<i>Addendum 2014</i>	<i>Addendum 2017</i>
Retail Public Net SF	1,500	1,400 w. cafe	1,800
Retail Management	In-house	Contracted Out	Unknown
Food Service	1,050	In above	200
Indoor Café Seating	75	75	Unknown
Outdoor Seating	Yes	Yes	Unknown
Event Center and Catering Space	-0-	5,400	4,355
STEM Learning Ctr.	Yes	No	Yes
Membership Program	Yes	Yes	Undecided

Table 17.1

Sources: Payette (Architects) and White Oak Associates

Overview

One of the objectives of *Addendum 2017* is to update the operating costs (recurring and non-recurring) that the Coast Guard will be expected to fund annually. This *Addendum* does not update the assumptions for earned revenue as whatever entity manages the revenue activities will be providing their own assumptions and projections.

It is recommended that business plans be developed for each category of earned revenue, the gift shop, paid programs, function rentals, etc. Any earned revenue received will follow the guidelines of entities that are permitted to receive revenues.

In previous reports it was assumed that after opening, the Association, through annual net income derived from earned and support revenue and fundraising, would help support the Museum. In *Addendum 2014*, in the first five years of operations, net income (in 2014\$) ranged from almost \$30,000 in year one to \$126,000 in year five or about 1% to 4% of the total operating cost. For a variety of reasons, including a more conservative approach to forecasting funding needs, this *Addendum 2017* assumes the Coast Guard will cover all *core operations*, as well as non-recurring costs, without on-going support from the Association. The Association will

pursue support from donors and sponsors for its own activities and programming, including the Margin of Excellence programs at the Museum. That programming will be providing will be a major benefit to the Museum and its visitors.

With the change in the building and component sizing the opportunity for earned revenue has decreased in some areas (café) and increased in others (store.) The Event Space is slightly smaller but still adequate. The Association is no longer sure that it will have a membership program as membership to a free museum is not as robust as at museums with ticketed admissions..

Gift Shop and Food Services

As in *Addendum 2014*, the store and limited food service are expected to be in the same space.

Gift Shop

In this *Addendum 2017*, the size of the store, as recommended by the planners in Chapter 20 “Architectural Program”, totals 1,800 SF. An additional 200 SF is allocated for the store manager and cash handling. Storage space needed for merchandise stock is budgeted at 1,000 SF and will be in a leased space off-site. The building is not large enough to accommodate storage for the store.

It has not yet been determined if the store will be contracted out or managed in-house. In researching the option of contracting out management of the store, the planners spoke with a vendor¹ who manages stores at many museums, including military museums. They suggested that the optimal size for the public space of the store is 2-3,000 square feet, but since the Coast Guard Museum is a smaller facility a store of 1,200-1,500 could work. Additional space is needed for back of store needs, including storage, a desk for the store manager, a computer server, a safe and cash handling needs. That space might be 600 to 800 square feet. If clothing is sold then multiple sizes need to be stored and more space would be needed. These parameters are in line with White Oak Associate’s current architectural program for the store and off-site storage, even with a small portion of the 1800 SF of public space allocated to food service.

If an outside vendor is contracted to manage the store they will most likely want to manage on-line sales as well.

If contracted out, the revenue sharing percentage for the store owner would be on the low end of the revenue sharing scale, around the 10% level. With several years having passed since *Addendum 2014*, the previous estimate for per capita sales of \$1.20 can be increased to \$1.50 to \$1.75.

Branded items will be important and the Museum should get the rights to use Coast Guard logos in items to be sold.

Food Service (excluding catering)

Café’s in museums with more modest attendance than in larger museums generally have minimal, if any, net income from food operations (excluding catering). Because of that, combined with the limited space available in the current building design, it does not make sense

¹ Toby Mensforth of the Event Network.

to have a full Café. A place for some level of limited food service, such as coffee/tea and snacks, can be accommodated in the store.

If a contractor is used to manage the store it is possible they can also manage the food service, but that should not be counted on.

Function Rentals and Catering

The current architectural program, as recommended by the planners, has an event space and catering kitchen sized at 4,355 versus 5,400 in *Addendum 2014*, or 1,045 SF less. Nevertheless, the current space is still be adequate. It retains the spectacular views overlooking the Thames River and will be a desirable location for special events and functions, such as weddings, reunions and retirement parties. Programming of the space is expected to be done by both the Museum and the Association. A shared scheduling program should be used to avoid conflicts.

As stated in *Addendum 2014*, the National Coast Guard Museum has a great opportunity to reach a national audience for function rentals by targeting the Coast Guard community and groups within the Coast Guard family such as Academy graduates, reservists, ship reunions, personnel stationed at a particular base, etc. Coordinating with other organizations, such as Military.com, that post reunion information on their Web sites, will be beneficial.

Other groups and individuals, including other Coast Guard related groups, could also be targeted nationally and regionally, such as:

- Coast Guard Auxiliary
- Coast Guard Tug Association
- US Power Boat Squadron
- Chief Warrant Officers
- Chief Petty Officers
- Cutterman Association
- Coast Guard Aviation Association
- Coast Guard Academy Alumni Association
- Foundation for Coast Guard History
- Coast Guard Academy Parents Association
- Association of Lighthouse Keepers
- Other Lighthouse Associations

Another target market for function rentals is Connecticut businesses in maritime related industries.

No study has been conducted of the local function rental market and it is recommended that the Association undertake one to inform future revenue potential based on estimating the number of events per year, the average number of people per event and average gross revenue per capita from catering. A study should analyze the level of competition in the market. There are many

function rental and event spaces in the Mystic Country area, including at Mystic Seaport, the Mystic Aquarium, the Submarine Force Museum, the casinos and more.

An understanding of the New London function rental market and the development of a targeted marketing campaign, combined with the uniqueness of a venue affiliated with the Coast Guard, will determine how successful the function rental operation will be.

Membership

Prior reports had a membership program managed by the Association. At this point, it is unclear if the Association will pursue membership. Some military museums, even those that are free, offer memberships and others do not. Offering membership is more problematic at a museum that has free admission. But there are many reasons that individuals and corporations might want to be members. Offering discounts on programs and the store would be attractive to the local population, as might access to the Early Learning Center, especially during the off season.

Nationally, members of the Coast Guard family may wish to have a connection with the Museum and enjoy getting the newsletter. Corporations would join to show their support for the Museum and the Coast Guard. Higher level giving and sponsorships would be in addition to membership revenues. Members are a good target market for annual giving and funding special projects. Those funds would be procured by the Association.

Programs

The Association is planning on offering fee-based programming, to schools and other groups and the general public. Programs can occur in the STEM Learning Center, in the Feature Theater and in the Event Center. Many programs at museums, especially for schools, do not result in significant net income. Exceptions are single day and multi-day summer and holiday programs and camps for children. Programs are an important aspect of fulfilling the mission and objectives of the Museum and will be at the core of the Association's Margin of Excellence initiative.

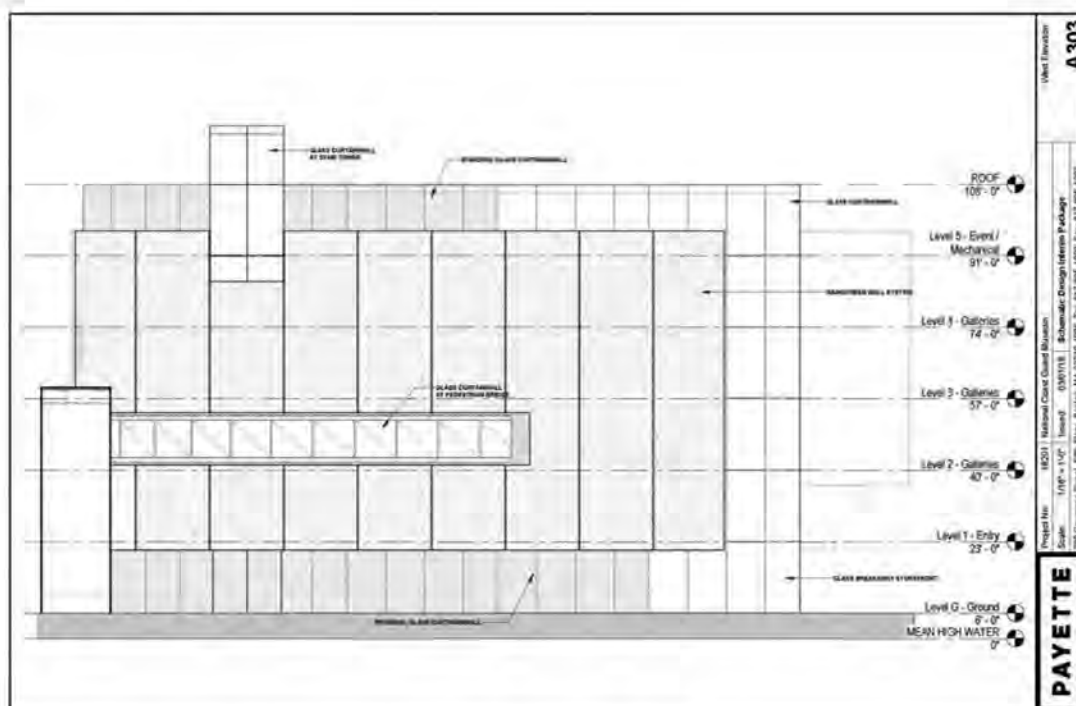
Risk Mitigation

Risk mitigation in regard to earned revenue is already addressed in the current business model for the Museum, as it assumes no on-going support from the Association after the Museum opens, except for Margin of Excellence programming.

Architectural Program

National Coast Guard Museum

Addendum 2017 to Chapter 20



Chapter 20 of the Museum's 2008 *Strategic Master Plan* (the *Plan*) describes the shared assumptions underlying the capital and operating economic model related to the architectural building program. The 2013 *Addendum* addressed those aspects of the *Plan* that had been affected by the Gauchat-Santos concept design. This *Addendum* addresses only those aspects that have changed enough since that design to merit changes to the *Plan* which are related to the Schematic Design and space allocation by Payette Architects. At this writing, schematic design has been completed and the documents of March 9, 2018 and April 19, 2018 have been used for analysis and as the stimulus for a revised recommended architectural program. Payette's Schematic Design documents incorporated in this document illustrate what the Museum might be like for fund raising and public relations reasons.

The goal of institutional success at achieving the Museum's purposes and objectives within the economic model requires balancing the allocations to public spaces and support spaces. The amount of public space speaks to how effective the museum might be in reaching its audiences, and the amount of support space speaks to how efficiently the Museum can handle those audiences and operate its offerings. The allocation of net square feet (NSF) in the Architectural Program (v6.3) is the recommended balance, within the limit of the 50,550 available NSF. If that limit increases, even more support space should be added, bringing more of the off-site functions on-site for greater efficiency.

The Architectural Program focuses on the Coast Guard's needed on-site support spaces, and does not include Association's support needs as those have not been defined. Once those are understood, the Association, who are contracting the Architects can: a) fit support spaces within the Event Center, Gift Shop and STEM Learning Center; b) assign some of any additional NSF found from either a larger building or a more efficient gross-up; c) reduce the public spaces; and/or d) decide to operate off-site.

Design Day Calculations

Capacity, Parking and Design Day Calculations National Coast Guard Museum

Assumptions

Typical Year Attendance	292,000	Site Visits Per Year
Extraordinary Loading Factor	20%	In addition to Typical Year
Max Building Demand Will Be:	350,400	Facility Visits per Year
Highest Month Capture Ratio:	14%	Peak Month Share of the Yearly Total
Highest Day-of-Week Capture Ratio:	23%	Peak Day's Share of a Summer Week
Number of Weeks in a Month	4.33	Fifty-two Weeks Divided by 12 Months
Average Dwell Time:	1.50	Hours for the Average Visit
Peak Dwell Time Capture Ratio:	40%	Of Design Day During Heaviest Hours
Visitors Arriving by Car:	80%	During Summer Weekends
Visitors per Car:	2.7	During Summer Weekends
Volunteer (6) & Staff Size (27.25)	33.25	On-site at One Time During Weekends
Staff per Car	1.1	Accounts for Car Pools, Bikes, Walking, Etc.

Calculations

Design Day Capacity:	2,606	Visitors on a typical August weekend day
Peak Momentary Capacity:	1,042	Design Capacity (Code Capacity should be higher)
Hourly Peak Flow:	695	Visitors/hour processing speed
Peak Flow:	12	Visitors/minute processing speed
Peak Car Parking:	309	Cars (weekends, principally)
Staff & Volunteer Parking:	30	
Total Parking	339	

Table 20.1

Source: Connecticut's Vision Index (Autumn 2016) Visitor Seasonality (2014-2016; White Oak Associates, Inc.

Architectural Program Analysis

The following table summarizes the development of the Architectural Program from its inception in 2008 (version 1), through the Concept Design phase, the preliminary Schematic Design phase by Payette, the 2017 revised White Oak program version and, finally, the completed Schematic Design phase by Payette.

The table also illustrates the percentage of total net area each space category occupies in its respective category; also shown is the change in net area of each of the categories from the preliminary to the final Schematic Design.

Comparison of Net Program Spaces (v. 6.3)

National Coast Guard Museum

	2008 White Oak Program	2014 Addendum Concept Design	2017 Payette Prelim Design	2017 White Oak Program	White Oak Program % of Net	2018 Payette Schematic Design	Payette Schematic % of Net Areas	Change from Prelim to Schematic
Entry, Lobby, Free Zone Amenities	1,775	2,000	4,600	2,910	5.8%	6,247	11.4%	1,647
Museum Store & Café	3,970	1,400	800	2,350	4.6%	2,398	4.4%	1,598
Galleries	22,170	26,400	32,100	26,925	53.3%	34,882	63.5%	2,782
Feature Theater	5,050	0	2,600	3,200	6.3%	2,862	5.2%	262
Simulation Center	1,000	0	0	0	0.0%	0	0.0%	0
Lecture Space	0	1,800	0	0	0.0%	0	0.0%	0
STEM Learning Center	2,055	0	3,950	4,600	9.1%	0	0.0%	-3,950
Event Space w/Catering Kitchen	0	5,400	4,100	4,355	8.6%	5,108	9.3%	1,008
Collections Center	2,525	0	0	400	0.8%	0	0.0%	0
Administrative	3,205	1,800	1,450	3,415	6.8%	1,925	3.5%	475
Facility Support Areas (Net)	2,420	3,000	950	2,395	4.7%	1,522	2.8%	572
Total Net Museum Floor Area	44,170	41,800	50,550	50,550	100.0%	54,944	100.0%	4,394
Gross-up Areas (GSF)	17,668	12,500	17,775	17,775		25,599		7,824
Total Museum Floor Area	61,838	54,300	68,325	68,325		80,543		12,218
Eagle Storage (NIC)	0	0	0	0		1,042		1,042
Total Building Floor Area	61,838	54,300	68,325	68,325		81,585		13,260

Table 20.2

Source: Payette Architects; White Oak Associates, Inc.

Notes to Table 20.2:

- The “2017 White Oak Program” is the basis for *Addendum '17*.
- Although neither the 3/9/18 drawings or the 4/19/18 area schedule show space dedicated to the STEM Learning Center, Early Learning Center, etc., it is understood among the team that these spaces will be carved out of what is currently shown as exhibit space in Design Development.
- Similarly, the on-site Collections space – the Clean Work Area - requested by the Coast Guard curators and recommended by White Oak does not yet appear in the architectural documents but will be developed in Design Development. Note that the other components of the Collections Center have been moved out of the new facility and into the US Coast Guard Academy or off-site.
- The space entitled *Eagle Storage* is a placeholder whose presence and nature are not confirmed at this point. For the purpose of the *Master Plan*, White Oak considers this space entirely outside the Museum’s architectural program and economic planning.
- Although the total area of the building has grown in the course of Schematic Design (for reasons the architects describe as technical), they also advise that it will likely shrink during Design Development. Consequently, White Oak recommends that the architectural program used in the model not be increased in size at this point.

Changes in the Payette Schematic Design (March-May, 2018)

- The Payette schematic plan benefits significantly from the reduction of public entrances to one primary visitor entrance.
- The location of the primary visitor entrance has moved to the interior of the building along its south side. It serves visitors arriving from two approaches: the Pedestrian Bridge and an entrance on the ground level from the City Pier Plaza area.
- The Café has been deleted as recommended by code and marketing analysis. A modest snack counter is being contemplated by the team either in or near the Museum Shop. On busy days, this small amenity would possibly be augmented by mobile food service, especially outside in good weather.
- The size of the Museum Shop has been significantly increased to make it attractive for an outside operator and to facilitate its use as a multi-purpose space.
- Gallery space has been increased; it is now almost 7,000 NSF larger than the latest White Oak program. It must be understood that at this point, however, that a good deal of that “extra” space will be developed during Design Development into exhibit support spaces, STEM Center spaces, the Early Learning Center, and other program spaces currently not reflected in the design.
- The deletion of the Gallery Hub is primarily due to the layout of exhibit halls on three separate levels; no single space could efficiently address all three levels.
- The idea of a simulation center has been replaced by the use of simulators in the STEM Learning Center.
- The area assigned to required administrative spaces has been increased to accommodate the desire to house all Coast Guard personnel on-site and to use off-site spaces as little as possible.
- There is currently very little (750 NSF) space assigned to the basic maintenance of exhibits or the collection artifacts used in them. It is understood by the team that such spaces will need to be accommodated on-site, presumably carved from space currently assigned to galleries.
- There is a significant increase in the total Museum floor area (not including the Eagle Storage placeholder) of approximately 18%. The architects describe this increase as being caused by technical factors. They also advise that the building will likely shrink during Design Development.
- The pedestrian overpass is now curved and routes pedestrian traffic to one of two approaches to the main entrance.
- It is now clear that Payette is the architect of both the Museum and the Pedestrian Bridge

White Oak Architectural Recommendations: Design Development

In response to the Schematic Design documents and subsequent conference call clarifications, White Oak offers the following recommendations as the project enters the Design Development phase:

- Although the Schematic Design illustrates a significant increase in total building area, the design team is advising that the building will likely shrink during design development. Consequently, White Oak recommends that the architectural program not be increased in size at this point. If a “surplus” of area remains near the end of the design development phase, it will be easy to find useful enhancements or additions.
- There is a case to be made for a secondary entrance to the facility that services repeat visitors and groups coming to the Museum for off-hours or ongoing programs. While encouraging the first-time visitor to experience the components of the Lobby is an important aspect of the visitor experience, there is value in allowing repeat visitors and well-guided school groups to go more directly to their destination. It is understood, however, that the security requirements – once they are determined - will ultimately be the deciding factor in the feasibility of this second entrance.
- There is a significant amount of space – both in plan and in volume – dedicated to the iconic helicopter-rescue event in the southwest corner of the building. White Oak recommends one of two scenarios for moving forward with this.
 - Develop this event further in detail to warrant designating it as one of the five wings. It seems quite feasible to add select interpretive material and related smaller iconic artifacts to create a feature which engages the visitor for more than simply a “wow” moment; or
 - Reduce the commitment of space to this icon, and apply the recouped space into other exhibits or program support.
- While location of the freight elevator serves floors one through four quite well, it is quite problematic on floor five. It delivers its passengers to a small corridor likely to have the character of any food service’s back door. The extreme convenience for food deliveries and waste disposal must be weighed against a very inauspicious entrance offered Museum visitors and event participants.
- It is highly desirable to develop a way for the Museum shop, the visitors’ storage, and the passenger elevators to be more visible from the main body of the lobby. It would be helpful for entering visitors to more easily find the place to store their belongings and discover the access to the upper gallery floors. And it would offer departing visitors one last chance to explore the Museum shop. Ideally all of those functions should be part of an orchestrated visitor circulation pattern that flows from one activity space to the others.
- There is a very strong case to be made for reversing the orientation of the interior of the theater,
 - It is very important that audience latecomers and staff be able to enter the space through the sound- and light-locks at the back of the theater without distracting the entire audience.
 - White Oak sees no reason that the permanent seating needs to be raked at a steeper angle than that allowed by ADA standards – one that provides completely acceptable sightlines for theaters that produce plays and show films. It appears that the space as drawn would accommodate a drop of almost 4’-6” from entrance to stage area – a satisfactory rake.

- The reversed orientation would also allow for the development of a wheelchair seating area at the back, at the front, or in the middle of the theater – or all three – satisfying the spirit as well as the letter of the ADA expectations.
- The reversed orientation would also permit non-public access to the projection booth directly from the lobby.
- There are several characteristics of the Event Center that are problematic.
 - As noted above, the entry sequence for guests – some likely to be significant supporters of the Museum – provides a cramped entry to the center probably made unattractive by its adjacency to the food service space.
 - The connections between the event center's main space and the catering kitchen space need to provide much more fluid circulation for wait staff. Two sets of double doors are recommended; two separate single doors is the minimum solution to prevent collisions between waiters delivering food and waiters returning dishes to the kitchen.
 - The proportions of the main event space will make the use of the full open space somewhat difficult. It is currently shown with a length three times its width. If the presenter (whether it be of a program or a toast) is positioned at the end of the space, the flat-floored space makes it extremely difficult for anyone in the far half of the room to see what is happening. The acoustics for amplified sound in a room of these proportions is also very difficult. On the other hand, if the presenter is located on the center of a long wall, audience will be arrayed close to 180° around the presenter. Other than trained actors or speakers, most presenters will find it difficult to achieve what they are there for. White Oak recommends a room proportion closer to three to four with interior dividers that create four smaller rooms of similar proportions. It is understood that providing separate entrances to all four smaller spaces might prove problematic.
 - While the generous pre-function space is certainly a feature, the flexibility of its use would be enhanced by at least one entrance serving it directly from the catering kitchen, rather than through the event space.
- Although the space allocated to the required administrative spaces has increased in Schematic Design (to 1,925 NSF), it still falls short of what White Oak has determined is the absolute minimum space needed to operate the Museum. To put these numbers into perspective, the following table illustrates the administrative space that exists in eight new museums of varying types and sizes and compares them to the Payette space allocation in terms of their percentage of total museum net area. White Oak recommends that at least 3,415 NSF (6.8% of total net museum area) be allocated to the required administrative spaces. Table 20.3 illustrates how that minimum recommendation compares to other facilities:

Comparison of Required Administrative Spaces (v. 6.3)

Institution (listed by NSF si	National Coast Guard Museum					Total
	Office Landscape	Enclosed Offices	General Service Areas	Office Support	Staff Lockers etc.	
Charlotte Museum of History Charlotte, North Carolina 55,637 NSF	3.32%	2.13%	1.30%	0.00%	0.00%	6.75%
Peoria Riverfront Museum Peoria, Illinois 57,967 NSF	4.78%	1.76%	1.31%	0.53%	0.00%	8.38%
Exploration Place Wichita, Kansas 68,293 NSF	3.91%	1.29%	2.19%	1.11%	0.47%	8.97%
Science Center of Iowa Des Moines, Iowa 85,252 NSF	2.78%	0.72%	1.35%	1.01%	0.50%	6.36%
TELUS World of Science Calgary, Alberta CN 101,442 NSF	1.55%	2.74%	1.33%	0.54%	0.39%	6.55%
Rochester Museum Science Rochester, New York 112,545 NSF	0.00%	5.39%	3.24%	1.44%	0.00%	10.07%
Orlando Science Center Orlando, Florida 132,228 NSF	2.39%	3.47%	1.52%	0.56%	0.00%	7.94%
Museum of Science & Indus Tampa, Florida 152,949 NSF	2.54%	5.06%	0.37%	0.54%	0.00%	8.51%
Average of all above:						7.94%
Average of all above w/o least and most:						7.85%
National Coast Guard Muse Payette Prelim Schematic 47,488 NSF	2.11%	0.95%	0.00%	0.00%	0.00%	3.05%
National Coast Guard Muse Payette Final Schematic 54,944 NSF	2.76%	0.00%	0.00%	0.75%	0.00%	3.50%

Table 20.3

Source: Payette Architects; White Oak Associates, Inc.

- It is of particular importance that access for service vehicles from Water Street to the Loading Dock be developed to allow the occasional large truck to back in quickly and easily. The 3/9/18 design drawings do not provide any information on this access. While the need to accommodate a full-size tractor-trailer truck is probably infrequent, there may be a traveling exhibit – or even a single artifact – that requires that kind of access.

White Oak Recommendations for Design Development Process

It is imperative that a process be developed quickly for identifying the best locations for the various specific program functions (e.g.: STEM Center, Early Learning Center, etc.) that will, by necessity, be carved out of space currently identified as “exhibit space.” While some flexibility in the spaces on the three Gallery Levels is clearly desirable, it must not be left to the exhibit designers (or their budgets) to identify and differentiate these program spaces in a well-defined choreography of the visitors’ experience that couples each program space with carefully considered programmatic and architectural support. White Oak strongly supports the understanding that arose out of the October 2017 team meeting in Boston that Payette would define the demising walls of the five wings and the program and support spaces, leaving the interior subdivision of the galleries to the exhibit designers. While White Oak would certainly endorse a more collaborative process between architects and designers, such a process needs to be firmly in place early in Design Development.

It is equally imperative that the exhibit designers add their voices to the discussion of the question of the “right” amount of glass in the building’s exterior facades. Because they will be the part of the team that brings the interior visitor experience to life, the team needs their experienced assessment of the degree to which the likely amount of sunlight and UV radiation will impact the exhibit design, particularly the impact upon artifacts.

Because of the probable complexity of coordinating the infrastructure, development costs, and independent budget of the proposed *Eagle* Storage area on the ground level, it is important to resolve the details of that proposal as soon as possible. This will enable the team to begin drawing the physical and budgetary lines that separate the Eagle Storage completely from the Museum’s program and budget.

It is important that the process by which the several principals and the many participants in this project can continue to produce a timely and effective implementation timeline. This has become a project in which all of its components need to succeed for any of them to succeed.

It will be useful to provide opportunities to convert some spaces into program spaces when and where needed in the future. It is timely to identify the investment in infrastructure that will make spaces sufficiently flexible and multi-purpose to allow significantly different uses at various times – whether that be on a daily basis or in response to the changing seasons.

It will be helpful to plan alternate uses for parts of the building in off-hours or off-season for either events or programs; it would be also be helpful to plan layouts that allow spaces to be simply off-line and closed.

Infrastructure is required that allows the Museum to flexibly adapt to future technologies with sufficient bandwidth capacity and opportunity for future additions and changes in distribution.

Special Requirements of Circulation

The architectural process to date has already been influenced by a standard museum concern that has grown into a major consideration: security. While the details of the system(s) and protocols judged to be essential by the Coast Guard have yet to be articulated, the basic concept is already clear: single-point entry.

This approach has pushed the entry point into the interior of the building, served by an approach directly from the Pedestrian Bridge and a second approach from ground level adjacent

to City Pier Plaza. The design team has taken advantage of the several winding staircases and elevator lobbies to define a large column of space in which an iconic helicopter is seen “rescuing” a child from a boat accident.

In addition to this dramatic image, there are additional special requirements of the entry circulation space.

- Visitors must be able to understand where they are going. Signs can help this process but it is more important that the visitor can easily see the destination.
- Clear and easily understood accommodation for two traffic pathways: one for incoming visitors and one for departing visitors. Whatever this means in terms of space utilization, it must contribute to the visitor’s sense of way-finding; it also must uphold the spirit as well as the letter of ADA.
- Choice of equipment and the detailed design of the space will be as user-friendly as possible with as little resemblance as possible to current TSA airport security processes.
- All experiences within the facility’s sequence of entry spaces must be enriched by the deep evocation of the history, mission, and ethos of the Coast Guard.

Architectural Program

The Architectural Programs below are the most comprehensive statement of the suggested changes in the physical master plan for the new facility and should be referenced as the definitive guide as the architectural design process continues into Design Development.

Introductory Notes

- The goal of institutional success at achieving the Museum’s purposes and objectives within the economic model requires balancing the allocations to **public** spaces and **support** spaces. The amount of public space speaks to how effective the Museum might be in reaching its audiences, and the amount of support space speaks to how efficiently the Museum can handle those audiences and operate its offerings. The allocation of net square feet (NSF) in the Architectural Program (v6.3) is the recommended balance, within the limit of the 50,550 available NSF. If that limit increases, even more support space should be added, bringing more of the off-site functions on-site for greater efficiency.
- The Architectural Program focuses on the Coast Guard’s needed on-site support spaces, and does not include the Association’s support needs, as those have not been defined. Once those are understood, the Association, who are contracting the Architects can: a) fit support spaces within the Event Center, Gift Shop and STEM Learning Center; b) assign some of any additional NSF found from either a larger building or a more efficient gross-up; c) reduce public spaces and/or d) decide to operate off-site.
- To develop the J-series of spaces in the architectural program – the Required Administrative Areas – the following generally accepted guidelines were used. All recommended allocations are at the low end of these ranges.

Administrative Space Allocation Guidelines
National Coast Guard Museum

Area	NSF
Executive Office	150-210 NSF
Department Head Office	120-150 NSF
Other Office	90-120 NSF
Cubicle	48-75 NSF

Table 20.4

Source: White Oak Associates, Inc.

- The fact that some portion of the total administration support space must be accommodated off-site presents a unique challenge for a document meant to describe the entire Coast Guard Museum facility. Consequently, section “J-50 Off-Site Administrative Spaces” has been added to allow a sense of the Museum’s entire scope to be developed in a way that doesn’t distort the important allocations of space within the new structure. Note that all off-site interior spaces are shown in brackets and do not contribute to the total net space in the administrative space or building totals.
- Included in the off-site spaces are a number of spaces –particularly storage spaces – that are truly only estimates at this time and should not be interpreted with the same degree of certainty as the rest of the architectural program. Additional information and decisions will be developed during Design Development to refine these estimates. In the interim, the balance of the program has been insulated from these yet-to-be-resolved issues.

Summary Architectural Program – version 6.3

The Summary Architectural Program in Table 20.5 below reduces the much longer Program in Table 20.6 below to give a snapshot of the entire Museum’s net areas and the percentage of the that total area allocated to each category and subcategory of the program.

Summary Architectural Program (Version 6.3)**National Coast Guard Museum**

Entrance Areas	NSF	Net %
Museum Free Zone & Entrance Lobby	2,500	4.95%
Free Zone Amenities	410	0.81%
subtotal	2,910	5.76%
Retail Areas		
Museum Store	2,000	3.96%
Food Service	350	0.69%
subtotal	2,350	4.65%
Feature Theater		
Sound/light Entrance & Exit	200	0.40%
Theater Space	2,600	5.14%
Control Booth & Equipment Room	250	0.49%
Theater Green Room	150	0.30%
subtotal	3,200	6.33%
Museum Galleries		
Gallery Wings (5)	23,925	47.33%
Changing Exhibit Gallery	1,500	2.97%
Early Learning Gallery	1,500	2.97%
subtotal	26,925	53.26%
STEM Learning Center		
Common Spaces	1,500	2.97%
Education Labs (5)	2,000	3.96%
Simulator Labs (5)	1,000	1.98%
Support Space	100	0.20%
subtotal	4,600	9.10%
Collection Center		
Collections Clean Work Area	400	0.79%
subtotal	400	0.79%
Required Administrative Spaces		
Reception & Administrative Landscape	925	1.83%
Enclosed Administrative Spaces	1,240	2.45%
General Service Spaces	900	1.78%
Administrative Support Spaces	350	0.69%
subtotal	3,415	6.76%
Event Center		
Multipurpose Event Space	3,500	6.92%
Kitchen	480	0.95%
Table/chair Storage	375	0.74%
subtotal	4,355	8.62%
Building Support Spaces		
Janitorial Spaces	125	0.25%
Maintenance Administrative and Shop	750	1.48%
Building Control Room	120	0.24%
Security Room	100	0.20%
Loading Dock Support Areas	1,300	2.57%
subtotal	2,395	4.74%
Total Net Areas (NSF)	50,550	100.00%
Total Gross-Up Spaces	17,775	
Total Museum Area	68,325	

Table 20.5

Source: Payette and White Oak Associates, Inc.

Detailed Architectural Program – version 6.3**Detailed Architectural Program (Version 6.3)**

National Coast Guard Museum

Exterior (ext); off-site (off); Visitor Experience Zone (ve)

Margin of Excellence Spaces (moe), and Support spaces (sup)

[Bracketed numbers not included in net interior SF]

Room Code Room Name

A. The Exterior Spaces		Net SF 2008	Net SF 2017	Net SF 2018	Zone
A-10	Site Perimeter				
A-11	Perimeter Curb-cuts and Signs	site	site	site	ext
A-12	Sidewalk Systems	site	site	site	ext
A-20	Parking (off-site)				
A-21	Car Parking (309 spaces + handicapped space	[TBD]	by others	by others	ext
A-22	Bus Parking (5 spaces)	[6,700]	by others	by others	ext
A-23	Staff & Volunteer Parking (30 spaces)	[14,400]	by others	by others	ext
A-30	Visitor Arrival				
A-31	Car Passenger Drop-off Area	site	site	site	ext
A-32	Bus Passenger Drop-off Area	site	site	site	ext
A-33	Arrivals Area Shelter	[1,000]	[1,000]	[1,000]	ext
A-40	Exterior Program Areas				
A-41	Celebration Plaza	[10,000]	by others	by others	ext
A-42	Volunteer Project Workshop/Shed	[2,000]	deleted	deleted	ext
A-43	Exterior Exhibit and Program Space	[5,000]	TBD	TBD	ext
A-44	Exterior Exhibit and Program Support Space	[500]	deleted	deleted	ext
A-45	Boardwalk (by New London)	site	by others	by others	ext
A-46	Piers & Wharves (future development)	site	by others	by others	ext
A-47	Under-building Void		TBD	TBD	ext
A-48	Rooftop Exhibit Space		TBD	deleted	ext
A-49	Memorial Area (on deck outside the Event Center)		TBD	TBD	ext
A-50	Building Service Entries				
A-51	Service Vehicle Approach	site	site	site	ext
A-52	Exterior Loading Dock (covered)	[160]	[160]	[160]	ext
A-53	Service Loading Door (minimum 11' wide x 8'-10" tall)				ext
A-54	Staff Service Entrance				ext

B. The Entrance Areas		Net SF 2008	Net SF 2017	Net SF 2018	Zone
B-10	General Public Entrance				ve
B-11	Public Entrance Vestibule & Security Sequence	in gross	in gross	in gross	ve
B-12	Group Entrance Vestibule & Security Sequence	in gross	in gross	TBD	ve
B-20	Free Zone & Entrance Lobby				ve
B-21	Main Lobby	1,200	2,500	2,500	ve
	• Welcome Center/Tickets and Admission				ve
	• Lobby Icon Area				ve
	• Visitor Orientation & Reception				ve
	• Coast Guard Overview Exhibit				ve
	• Registration Kiosk(s)				moe
	• Stroller & Wheelchair Parking				sup
	• Feature Theater Queuing Area				ve
	• Lobby Storage				sup
B-22	The Guardian History Center	125	deleted	deleted	
B-23	Admissions & Cash Room	150	100	100	sup

Table 20.6 (Part 1 of 6)

Source: Payette and White Oak Associates, Inc.

Detailed Architectural Program (Version 6.3)

National Coast Guard Museum

Room Code Room Name**B-30 Free Zone Amenities**

B-31	Coat Room & Public Lockers (120 half-height lockers)	240	250	250
B-32	Free Zone Washrooms	in gross	in gross	in gross
B-33	Family Washroom/First Aid Room	60	60	60
B-34	Free-Zone Public Telephone Area	in gross	deleted	deleted
Subtotal		1,775	2,910	2,910

C. The Museum Store Areas

Net SF 2008 Net SF 2017 Net SF 2018

C-10 Retail Area

C-11	Gift Shop Merchandise Area	1,500	1,800	1,800
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C-20 Support Areas

C-21	Manager & Administrative Space	125	200	200
C-22	On-site Stock Storage			
C-23	Off-site Stock Storage		[1,000]	see J-62

Subtotal 1,625 2,000 2,000

D. The Cafe/Food Areas

Net SF 2008 Net SF 2017 Net SF 2018

D-10 Museum Café Areas

D-11	General Cafe Seating Area (75 seats)	1,050	deleted	deleted
D-12	Exterior Patio Seating (75 seats)	[1,200]	deleted	deleted

D-20 Support Areas

D-21	Servery/Food Line Area	500	deleted	deleted
D-22	Cafe Kitchen	600	deleted	deleted
D-23	Walk-in Refrigerator	60	deleted	deleted
D-24	Trash Holding Area	60	deleted	deleted
D-25	Cafe Administrative Space	75	deleted	deleted

D-30 Concession & Vending Area

D-31	Food Service		200	350
D-32	Food Service Storage		150	

Subtotal 2,345 350 350

E. Feature Theater

Net SF 2008 Net SF 2017 Net SF 2018

E-10 Theater Lobby & Support Spaces

E-11	Theatre Area Lobby	750	see B-20	see B-21
E-12	Concession Stand		see D-31	see D-31
E-13	Theater Lobby Storage		TBD	see B-21
E-14	Theater Exit Lobby	in gross	combined	see B-21
E-15	Theater Area Washrooms	in gross	in gross	in gross

E-20 Feature Theater

E-21	Sound/Light Lock Entry	100	100	100
E-22	Seating & Stage Area (150)	3,500	2,600	2,600
E-23	Sound/Light Lock Exit	100	100	100

Table 20.6 (Part 2 of 6)

Source: Payette and White Oak Associates, Inc.

Detailed Architectural Program (Version 6.3)

National Coast Guard Museum

Room Code Room Name

E-30	Theatre Support Spaces			
E-31	Ushers' Room	100	deleted	deleted
E-32	Theater Administrative Space	150	deleted	deleted
E-33	Control Booth & Equipment Room	250	250	250
E-34	Digital 3D Glasses Cleaning Room	100	deleted	deleted
E-35	Theater Green Room		150	150
Subtotal		5,050	3,200	3,200

F. The Museum Galleries 2008

Net SF 2008

F-10	Gallery Hub	2,700
F-20	Introductory Theater	1,270
F-30	Legacy Galleries	10,000
F-40	Today/Tommorow Galleries	6,000
F-50	Art Gallery	1,000
F-60	CG Live!	1,200
Subtotal		22,170

F. The Museum Galleries 2017

Net SF 2008 Net SF 2017 Net SF 2018

F-10	Gallery Wings			
F-11	Defenders Wing	5,000	4,785	
F-12	Enforcers Wing	5,000	4,785	
F-13	Protectors Wing	5,000	4,785	
F-14	Champions Wing	5,000	4,785	
F-15	Lifesavers Wing	5,000	4,785	
F-20	Changing Exhibit Wing			
F-21	Changing Exhibit Gallery	1,500	1,500	
F-30	Early Learning Wing			
F-31	Early Learning Gallery	1,500	1,500	
Subtotal		28,000	26,925	

G. Motion Simulator Ride (Venue 3)

Net SF 2008 Net SF 2017 Net SF 2018

G-10	Simulation Center Lobby/Queue Area			
G-11	Lobby/Queue Area	in gross	deleted	deleted
G-20	Simulation Center			
G-21	Sound/Light Lock Entry	1,000	deleted	deleted
G-22	Seating & Stage Area		deleted	deleted
G-23	Sound/Light Lock Exit		deleted	deleted
G-30	Simulation Center Support Spaces		deleted	deleted
G-31	Control Booth & Equipment Room		deleted	deleted
Subtotal		1,000	0	0

H. The STEM Learning Center

Net SF 2008 Net SF 2017 Net SF 2018

H-10	Common Spaces			
H-11	Command: Group Orientation & Lunch Room	600	1,200	1,200
H-12	Group Storage Area	150	300	300
H-13	Food Vending Area	80	see D-30	see D-31

Table 20.6 (Part 3 of 6)

Source: Payette and White Oak Associates, Inc.

Detailed Architectural Program (Version 6.3)
National Coast Guard Museum

Room Code	Room Name				
H-20	Education Labs				
H-21	Program Lab 1	600	600	600	moe
H-22	Program Lab 2	500	500	500	moe
H-23	Program Lab 3		400	400	moe
H-24	Program Lab 4		300	300	moe
H-25	Program Lab 5		200	200	moe
H-30	Simulator Labs				
H-31	Simulator Lab 1	see G-20	200	200	moe
H-32	Simulator Lab 2		200	200	moe
H-33	Simulator Lab 3		200	200	moe
H-34	Simulator Lab 4		200	200	moe
H-35	Simulator Lab 5		200	200	moe
H-40	Learning Center Support Spaces				
H-41	Operational Support	125	100	100	moe
H-42	Washrooms				
	Subtotal	2,055	4,600	4,600	

I. Collections Center	Net SF 2008	Net SF 2017	Net SF 2018	Zone
I-10 Collections Work Area				
I-11 Clean work Area	400	400	400	sup
I-20 Collections Storage				
I-21 Working Collections Storage (off-site @ Acade	2,000	TBD off-site	[2,000]	off
I-30 Collections Administrative Space				
I-31 Curator of Exhibits & Collections (off-site @ Ac	125	TBD off-site	[120]	off
I-32 Museum/Collections Technician (off-site @ Academy)			[100]	off
Subtotal	2,525	400	400	

J. The Required Administrative Spaces	Net SF 2008	Net SF 2017	Net SF 2018	Zone
J-10 Administrative Landscape				
J-11 Staff Entrance from Lobby	in gross	in gross	in gross	
J-12 Entrance and Reception	80	100	100	sup
J-13 Administrative Landscape (14 work stations)	785	600		
Executive Assistant to Museum Director			75	sup
Executive Assistant to Association President			75	sup
Visitor Services Assistant			50	sup
Volunteer Manager (docent training)			75	sup
Procurement Liaison			50	sup
Accounting Clerk/Bookkeeper III			50	sup
Community Liaison Assistant			50	sup
Web and Social Media			50	sup
Visitor Services Administrative Assistant			50	sup
Education Specialist: Programs			75	sup
Education Assistant: Programs			75	sup
Storekeeper (military 2)			50	sup
Public Affairs Officer (military 3)			50	sup
Yeoman (military 4)			50	sup

Table 20.6 (Part 4 of 6)

Source: Payette and White Oak Associates, Inc.

Detailed Architectural Program (Version 6.3)

National Coast Guard Museum

Room Code	Room Name				
J-20	Enclosed Administrative Spaces				
J-21	Museum Director	150	150	150	sup
J-22	Flexible Office (visiting officers, Association St	100	100	150	sup
J-21	Enclosed Administrative Spaces				
J-23	Museum Director	50	50	150	sup
J-26	Visitor Services and Events Manager	100	deleted	100	sup
J-27	Command Silver Badge (military 1)	100	deleted	100	sup
J-28	SR Accountant Liaison to USCG Headquarters	[100]	[100]	100	sup
J-29	Community Liaison and Public Relations			100	sup
J-30	Information Technology Manager			100	sup
J-31	Director Exhibits & Programs			100	sup
J-32	Office Space	100	deleted	deleted	
J-33	Office Space	100	deleted	deleted	
J-40	General Service Areas				
J-41	Board/Conference Room	500	500	500	sup
J-42	Staff, Docent & Volunteer Lounge & Kitchenett	300	300	400	sup
J-50	Administrative Support Spaces				
J-51	Mail, Equipment, Supply & Storage Room	250	250	250	sup
J-52	Local Administrative Storage	100		100	sup
J-53	Management Information Services	200	see J-64	see J-30	sup
J-54	Dedicated Administrative Washrooms	in gross	in gross	in gross	sup
	Subtotal on-site	2,915	2,050	3,225	
J-60	Off-Site Administrative Spaces				
J-61	Off-site museum administrative support spaces			[1,000]	off
J-62	Off-site museum shop storage			[1,000]	off
J-63	Off-site museum storage			[2,000]	off
	Subtotal off-site	0	0	[4,000]	

K. Event Center	Net SF 2008	Net SF 2017	Net SF 2018	Zone
K-10 Public Space				
K-11 Multipurpose Event Space		3,500	3,500	moe
K-20 Support Spaces				
K-21 Kitchen		480	480	sup
K-22 Table/Chair Storage		375	375	sup
Subtotal	0	4,355	4,355	

L. The Building Support Areas	Net SF 2008	Net SF 2017	Net SF 2018	Zone
L-10 Building Support Spaces				
L-11 Janitorial & Facility Support	75	125	125	sup
L-12 Staff Washrooms	in gross	in gross	in gross	sup
L-13 Maintenance Administrative Landscape	375	750	750	sup
L-14 Exhibit Maintenance Shop	500			
L-15 Equipment Parking			in gross	sup
L-16 Building Control and IT Server Rooms	120	120	220	sup
L-17 Security Room	150	100	100	sup
L-18 Freight Elevator	in gross	in gross	in gross	sup
L-19 Passenger Elevators	in gross	in gross	in gross	ve
L-20 Loading Support Areas				
L-21 Loading Dock	600	700	700	sup
L-22 Shipping, Receiving & Crate Storage Area	600	600	500	sup
Subtotal	2,420	2,395	2,395	

Total Net Museum Area (NSF) 43,880 50,260 50,360

Table 20.6 (Part 5 of 6)

Source: Payette and White Oak Associates, Inc.

Detailed Architectural Program (Version 6.3)
National Coast Guard Museum

Room Code	Room Name	Net SF 2008	Net SF 2017	Net SF 2018	Zone
M.	Gross-up				
	2008 Gross Spaces (NSF x 0.4)				
	NSF x 0.4	17,552			
	2017 Gross Spaces				
M-11	Passenger Elevators (2)	1,000	1,000	ve	
M-12	Stair 1	1,125	1,125	ve	
M-13	Stair 2	1,350	1,350	ve	
M-14	Circulation	2,400	2,400	ve	
M-15	Restrooms	2,600	2,600	ve	
M-16	Freight Elevator	1,500	1,500	sup	
M-17	Mechanical/Utility	7,800	7,800	sup	
	Subtotal	17,552	17,775	17,775	
Total Gross Museum Area (GSF)		61,432	68,035	68,135	

Table 20.6 (Part 6 of 6)

Source: Payette and White Oak Associates, Inc.

Aspects of the 2008 Master Plan that Remain Unchanged

While this *2017 Addendum to the 2008 Master Plan* focuses on those aspects of the *Master Plan* affected by subsequent architectural design developments, it is important to briefly call attention of those aspects of the *Plan* that remain very much in effect. Please refer to the 2008 document for the following topics:

- Overview of Objectives
 - Excellence in Functional Efficiency and Economy
 - Excellence in Aesthetics and Imagery
 - Excellence in Sustainability
 - Excellence in Community
- Building
 - Building as Visitor Experience
 - Building as Learning Environment
 - Building as Future Space
- Overall Design Criteria and Operational Characteristics

- Human Safety, Security and Life Safety Code Compliance
- Building Integrity
- Imagery and Design Aesthetics
- Design for Learning
- Design for the Visitors
- Sustainable Design/Alternative Energy Sources
- Adaptability, Versatility, and Programmability
- Fixed Budget; Inclusive Scope
- Public Involvement
- Additional Defining Characteristics of Museum Areas
- Making Transitions Between Exhibit Areas
- Inventory of Principal Coast Guard Support Systems

While all of these descriptions of various aspects of the Museum remain quite relevant to the Design Development phase, particular attention is drawn to the “Inventory of Principal Coast Guard Support Systems.” In the ongoing efforts to develop collaboration among all of the team members, it is particularly important that the architects and exhibit designers together begin to integrate these systems into the building design. While many are quite self-standing, some require significant infrastructure to facilitate the implementation of opening day and future visitor experiences; these tend to also be the capacities that are very difficult to retrofit.

Public Relations Strategies

National Coast Guard Museum

Addendum 2017 to Chapter 22

One of the Museum's main roles is symbolic: The Museum is the public face of the US Coast Guard. The Museum is where the Coast Guard tells its story. The Museum is a public forum for the Coast Guard's messages. The Museum is the first door to involvement with the Coast Guard. The Museum is the Coast Guard's public platform.

This chapter focuses on the public relations strategies that the Coast Guard will implement through its staff and contractors to implement the Coast Guard's communications objectives for the Museum. Additionally, it is anticipated that the Association will implement marketing and sales efforts to support their revenue-producing ventures, but those plans are undeveloped at this time, and not included in this chapter.

General Objectives

The primary objectives of the *Public Relations Plan* for the new National Coast Guard Museum are:

- 1 To serve the Museum's mission and objectives, with a focus on serving the Coast Guard as one of its most effective portals to the public.
- 2 To build broad public awareness of the Coast Guard.
- 3 To inspire positive attitudes toward the Museum among the residents of the region by communicating its mission, products and services.
- 4 To attract visitors and program participants in numbers detailed elsewhere in the *Plan*.
- 5 To establish the Museum as a successful museum and attraction in southeast Connecticut.
- 6 To analyze the audience and forecast their attendance and interests and to use that information and other market research to be a "learning organization," constantly improving its relationship with audiences and supporters.
- 7 To help the Association achieve their operational earned revenue goals.
- 8 To define the goals, strategies, budgeting and implementation of each of the integrated communications campaigns (media, publicity, promotions, etc.).
- 9 To support the Association's fundraising and development efforts and to acknowledge their donors and promote their participation in an appropriate manner.
- 10 To support community relations efforts and to acknowledge promotional and in-kind partners and promote their participation in an appropriate manner.

Market Environment

The planners surveyed the market from the particular perspective of museum public relations, and the salient characteristics are noted in Chapter 12 "Market Analysis" and Attachment D.

Communications Goals

A successful public relations program communicates many things -- ideas, information, a sense of the experience and most significantly, a call to action. This multifaceted message must be delivered as effectively, efficiently, and accurately as possible. However, before any of this can happen, it must be determined exactly what to say, how to say it, and who to say it to. Every effort should be made to keep the messages from becoming garbled or lost, and the right messages should be communicated at the right time through the right media to the right audiences.

The public success of the National Coast Guard Museum will be no different. It will hinge on communicating various combinations of ideas and information to specific markets at specific times. The complete public relations message, divides into four categories:

- 1 **Key Messages** describe how the facility will be positioned in the marketplace, what differentiates it from its competition, and how it is perceived in the marketplace. This positioning is akin to staking a claim in the market.
- 2 **Promises** are what benefits the Museum wants the audience to believe they will receive by visiting. These are the ideal experiences that the public relations campaign offers and communicates to the public.
- 3 **Ideal Reactions** are the desired feelings and perceived benefits to the visitors to National Coast Guard Museum. These are the comments the Welcome Team wants to hear as people leave the Museum. Ideally, these reactions are produced when the promises are delivered. This is what the "word-of-mouth" wants to be.
- 4 **Key Facts** are the details and logistics, such as opening hours, parking, show times, directions, etc., which will be communicated through publicity and collateral materials.

The lists that follow are intended to be used as check lists of information and imagery that might be communicated by any piece, be it a press release, brochure, print ad or slide show.

Key Messages: 2022 Description

The communications responsibilities of the Museum's public materials and image include the following messages (a master list; different messages should be selected for different audiences):

- 1 National Coast Guard Museum showcases the Coast Guard's stories through engaging visitor's experiences interpreting its historic collections and current activities and equipment.
- 2 The Museum is a world-class attraction filled with experiences that are meaningful for a wide range of audiences - from families to schoolchildren to senior citizens.
- 3 The Museum is a fun, entertaining place to visit.
- 4 The Museum is a multi-cultural educational facility committed to serving peoples from all backgrounds.
- 5 The Feature Theater is a prominent feature of the new facility.
- 6 The Museum has classrooms for group programs and more formal learning programs.
- 7 The Museum operates an active function rental business.

- 8 There will be changing traveling art exhibitions and special events which complement the exhibit experience and give the Museum a dynamic image.
 - 9 The Museum is a premiere attraction in the New London area, and one of the popular attractions in southeast Connecticut.
 - 10 The new Museum and pedestrian overpass bring more vitality downtown.
 - 11 The Museum serves both as a local resource for cultural fulfillment and as a destination attraction, which helps feed the New London economy.
-

Promises

- 1 By participating you will have a good time engaging with the Coast Guard and its stories and current missions.
 - 2 The Museum is a fun experience.
 - 3 The Museum is a welcoming, friendly and familiar place, and it is comfortable and inviting at any time for anyone to visit.
 - 4 The Museum offers top-quality visitor services and deeply meaningful educational value.
 - 5 By supporting the Museum you will also be contributing to a worthy cause.
-

Ideal Visitor Reactions

- 1 "Visiting the Museum was an exciting, fun experience."
 - 2 "The entire family learned something at the Museum. There was something for each of us and everyone learned something new."
 - 3 "The technologies and graphics used in the exhibits were very engaging and the Feature Theater was moving!"
 - 4 "The Coast Guard's story makes me proud to be an American."
 - 5 "Supporting the Museum is contributing to an important cause."
-

Key Informational Facts: 2022 Description

[Note: Blanks and "XX's" are to be filled in by staff when the information becomes public and available.]

- 1 General
 - The Museum will open its new facility in 2022.
- 2 Components
 - The Museum will have XX square feet when finished.
 - The themes covered by the Museum Galleries include:
 - Feature Theater is:
 - In addition to the exhibits and theater, the Museum will include:
 - Admission will be free to the Museum Galleries, Feature Theater and outdoor exhibits.

- Family and individual memberships are available for \$XX and \$XX respectively and entitle the holders to discounts on program fees, at the store and more.
- Group reservations are available by calling _____.
- The Museum facilities will be open from XX to XX, XX days a week.
- The Museum is located: XX
- The Museum can be reached by car easily from the ----- by the following routes:
- The Museum can be reached by public transportation by the following routes:
- The Museum is only ____ minutes from I-95 and ____ minutes from ----- (List other relevant locations).
- Parking is available for XX.
- The Museum is handicapped accessible.

Focus Audiences

Key Visitor Segments are defined and discussed in both Chapter 1 “Mission, Purposes, Values and Visitors” and in Chapter 12 “Market Analysis.”

Branding Process

Once the Museum is clear about its image and identity, it is ready to work with a professional brand identity developer. Be very careful about accepting offers to design logos and develop names from people who do not do this regularly for a living. The logo must be simple and memorable and must communicate somewhat abstract values and character. The design should take into account the Coast Guard’s strong existing brand identity, and the National Coast Guard Museum’s building design. Labels, signs, exhibit designs and numerous other aspects of the National Coast Guard Museum will be based on the logo and Corporate Identity System (CIS), so a strong graphic foundation is important.

There are two parts to the scope of work 1) developing the graphic identity, be it a logo, symbol or signature, and 2) developing a Style Manual that extends the principles of the logo into such areas as stationary layout, body copy, exhibit label templates, uniform colors, web page design, and other applications where the Corporate Identity System should rule.

The design should also provide solutions for how the National Coast Guard Museum’s public components will appear, including the Gift Shop, Feature Theater and STEM Learning Center, so as to present a unified public image.

Public Relations Strategies

- 1 **Communicate the Mission:** Non-profit organizations such as the Museum will receive greater benefits from people and businesses if the institution is mission-driven. A clear message should be communicated as to how and why the organization is enriching the cultural fabric of the region.

- 2 **Plan a Successful Opening:** Planning a strong opening for the new National Coast Guard Museum in 2022 is one of the most important decisions that can be made to assure success. The new attraction will only open once, and it must be fully ready and properly positioned at the beginning. Concentrating attention into the launch period is the most efficient way of generating community awareness and strong word-of-mouth.
- 3 **Mount a Major Public Relations Campaign:** As part of the pre-opening budget, a Public Relations Plan should be commissioned and fully developed at least two years prior to the opening of the new facility.:
 - 1 Market Research
 - 2 Internal Relations Plan
 - 3 Visitor Relations Plan
 - 4 Publicity Plan
 - 5 Advertising Plan
 - 6 Promotions Plan
 - 7 Special Events and Previews Plan
 - 8 Collateral Materials/Distribution Plan
 - 9 Group Sales Plan
 - 10 Direct Mail Plan
 - 11 In-house Promotional Plan
 - 12 Speakers Bureau
- 4 **Adopt a new Corporate Identity System (CIS).** Once the *Public Relations Plan* is complete, graphic designers should be engaged to design a logo and graphic system. Secondary logos should also be designed for the Feature Theater, Event Center and STEM Learning Center. All collateral materials should follow the guidelines of this graphic image. If necessary, the strategy is to produce fewer materials, but of top quality with professional graphics.
- 5 **Develop Word Of Mouth Advertising:** Word-of-mouth is the best form of public relations for any attraction. Immediately after opening the facility, it will be important to get as many community influencers in to see the Museum as possible. Exclusive previews are designed to make sure everyone has a first-rate experience so that they will make positive comments to their friends. Developing good word of mouth endorsements should be part of all aspects of the public relations of the Museum.
- 6 **Coordinate with the Association's Membership Campaign:** The launch and operating of the *Public Relations Plan* should be coordinated with Membership and Development activities.
- 7 **Utilize Promotional Support from Major Sponsors:** Major sponsors, especially corporations, should play a major role in providing valuable support when it comes to promoting and advertising the new Museum. A key strategy will be for the Museum to align itself and develop long-term relationships with corporations, major employers, media organizations, retail stores, other cultural attractions, and the tourism industry. Cross promotions will be organized in a variety of ways to gain exposure and ultimately to increase attendance.
- 8 **Know the Market and the Visitors' Needs:** It is extremely important to know who the audience is and what their needs are. In this way, the audience can be built and maintained. Having an ongoing market research program is of paramount importance in order to

understand the audience. An on-going market research program should be implemented, including monitoring of psychographic groups; to help handle costs, such programs can be shared with other attractions and agencies.

- 9 **Become Part of the Region's Tourism Campaign:** Take advantage of local and state tourism funds by participating in campaigns developed to attract tourists to the region. Remember, as a major attraction, the Museum is an important component in tourism development and as such, should be a non-paying participant in most instances.
- 10 **Develop Strategies to Fill Attendance Valleys and build upon Shoulders:** When analyzing how to increase attendance, focus on these strategies. Attract available audiences during seasonal valleys through value-added special programming and discount opportunities. Senior citizen and school group audiences are likely targets for building valleys. Shoulder seasons occur just before or after peaks. They frequently can be built upon with increased media, promotion or special programs.
- 11 **Prepare Annual Public Relations Plans and Seasonal Work Plans:** Advance planning is critical to achieving long-term public relations success. These plans must be developed in tandem with institutional strategic plans.
- 12 **Involve Community Resources:** There are many organizations that will be supportive of the Museum's mission and plans, and might be interested in participating in joint ventures or brokering introductions. These may include:

- The Economic Development Council
- The Chamber of Commerce
- The Tourist Development Council
- The Hotel Association

Staffing

National Coast Guard Museum

Addendum 2017 update to Chapter 23



This chapter presents the Museum staff list and salaries, including benefits, pre-opening staff hiring dates and costs and contract services needed for daily operations. This staff list is only for Coast Guard staff for the Museum and does not include Association staff.

Changes since either the 2008 *Master Plan* and/or *Addendum 2014* are primarily due to:

- An opening date currently expected to be Saturday, May 28, 2022 Memorial Day weekend.
- Decision by the Coast Guard to adjust salaries to Step 10 based on FY17 Coast Guard salaries for hiring. Previous reports used Hartford locality pay scales at Step 5.
- Decision by the Coast Guard to add four enlisted military staff to the Museum.
- Decision to add a Deputy Director focused on internal operations, freeing up the Director to focus externally on the local and regional community, the national community such as those

affiliated with the Coast Guard and maritime activities, partnerships, the Association, and the Coast Guard community, including former and retired coast guard personnel.

- Re-instatement of space, now called the STEM Learning Center, which will allow classes and more programming.
- Decision to outsource security and custodial/groundskeeping. Previously they were shown as on staff with a note stating they could be outsourced.
- Addition of more security contract labor to address heightened security that has been implemented at museums in the past years.
- Addition of seasonal contract labor to help with visitor services during the peak attendance months of June, July and August.
- A new position to handle lengthy process and tight timeline for procurement of contracts, goods and service.
- All staff will be housed on-site. In *Addendum 2014* administrative space was limited, which required many positions to be off-site. Having all staff on-site is a huge benefit and cost saving.

Overview

It is assumed that all top level Museum staff will be hired by the Museum Director (or Deputy Director prior to the hiring of the Museum Director) and the Museum's Senior Accountant and HR person, with the assistance of Coast Guard personnel and the Office of Budget Development for Operations at headquarters. Department heads should have input into hiring staff that will be reporting to them or in their department. In all cases, the Director, or the Deputy Director if the Director has not yet been hired, should have final approval.

The Museum will be staffed and run by employees of the Coast Guard. Additional Margin of Excellence programs will be delivered by the Association.

Table 23.1 indicates the areas of responsibility to be covered by the Association and by Museum Coast Guard personnel.

Areas of Responsibility
National Coast Guard Museum

Museum	Association
Admin, Finance and Human Resources	Development and Fundraising
Community Liaison and Public Relations	Marketing and Advertising
Programs, Events and Theater	Programs and Theater
Exhibits, Education, Heritage Asset Collections	Special Events and Evening Initiatives
Volunteers	Gift Shop and Food Service
Visitor Services	Function Rentals and Catering
Facility, Grounds and Security	Exterior Campus Events (e.g. visiting ships)

Table 23.1

Source: White Oak Associates, Inc.

Daily security, custodial and groundskeeping will be delivered by contracted services. In addition, the Museum will employ temporary or contract labor to assist with IT, grant writing,

research and evaluation, seasonal gallery staff during peak summer months, installation of new and/or changing exhibits, etc. There are line items for contract services in several of the department budgets, which appear in Attachment D.

Volunteers are expected to play a role in supplementing staff, especially in the exhibit galleries and in enhancing the overall visitor experience. Depending on federal regulations, the volunteers, and any associated costs, in some cases, may need to be coordinated through the Association while overall management of the volunteers would remain with the Museum.

The Museum staff list, except where noted, does not include other positions that are part of CG-0923, the Office of External Outreach and Heritage.

Adjustments to the Plan

Museum Departments

The Museum will have four departments, with an optional fifth category as a placeholder. The number of departments has not changed since the 2008 *Master Plan*, though who they report to has changed, since the position of Deputy Director was added.

Reports to Director

- Administration, Finance and Human Resources
- Community Liaison and Public Relations
- Military Command (as a placeholder until exact responsibilities and direct reports are determined)

Reports to Deputy Director

- Visitor Experience (Exhibits, Education, Heritage Asset Collections, Theater)
- Facilities and Security

Staffing

New or Re-instated Positions since Addendum 2014

- *Deputy Director*. The Deputy Director is currently on staff and is part of CG-0923, the Office of External Outreach and Heritage. This position is integral to the planning and development of the Museum prior to opening and is responsible for all oversight, hiring (prior to the start of the Museum Director position) and coordination of meetings and interface with key Museum project and Coast Guard personnel who are critical to the Museum enterprise. Once open, the Deputy Director, similar to a COO, will oversee operations of the Museum, allowing the Director to focus externally.
- *Assistant to the Deputy Director*. With the responsibility to run Museum operations the Deputy Director will need an assistant.
- *Procurement Liaison*. This position was added after meeting with the Director and staff at the National Museum of the Marine Corps. They felt this was a critical position to help requests move through on a timely basis and to manage the procurement process. They warned that there could be a significant lag time between purchase requests and approval and implementation and a person was needed to oversee the process.
- *Accountant Clerk/Bookkeeper*. This position is part-time and could be contracted out.

- *Community Liaison Assistant* (suggested as an option in *Addendum 2014*). This position is part-time. Person will assist the head of Community Liaison and Communication in maintaining relationships with local, regional and national communities.
- *Engineer/Supervisor* has been re-instated in order to bring the facility staff to an optimal level. That person will report to the Director of Facilities and Security. This position could cover all weekend hours of operation and special events.
- *Museum/Collections Technician* to assist with cataloguing and other tasks associated with the collection.
- *Education Assistant* for programs. This position is needed now that the STEM Learning Center has been re-instated and an Early Learning Center for young children has been added.
- *Visitor Services Assistant*. Reports to the Visitor Services and Events Manager. This position should be flexible, so that he/she may lend support as needed, such as for special events.
- *Military personnel*. The Coast Guard suggested, and White Oak agrees, that the presence of uniformed personnel at the Museum is important, as to fully reflect the Coast Guard. They will interact with the public and assist elsewhere as needed. Whether four (could be less) is the right number is not presently known nor their exact responsibilities. It is assumed that some of the tasks will include being in the Museum to interact with visitors, be a liaison and greeter for visiting enlisted personnel and lead VIP tours.
- The Feature Theater was re-instated in the current architectural program. No positions were added for ushers during the daytime to manage the entrance to the theater as those tasks can be covered by gallery staff and some of the Coast Guard military personnel that have been added.

Staff Positions Removed

- Security and custodial/groundskeeping will be outsourced.

Grade Level Adjustments since *Addendum 2014*:

- *Senior Accountant* was raised from GS-8 to GS-9.
- *Community Liaison and Public Relations* head raised from GS-11 to GS-12.
- *Director of Facilities/Security* raised from GS-10 to GS-13. This is the largest increase. This person needs to be brought on soon as they will oversee architectural design and construction building plans. This increase in step was also partially due to heightened security requirements seen at other museums.

Organizational Chart

The staffing and organizational chart is based on the concept that the Museum Director will be outwardly focused towards the community, the Museum's partners, including the Association, and the Coast Guard. The department overseeing community liaison, the Web site and social media will report to the Director, as will the Deputy Director. The Finance Department will also report to the Museum Director, as ultimately, the Director is responsible for the overall institution and its finances.

The Deputy Director will be second-in-command and be responsible for internal Museum management and operations, covering the responsibilities of a COO. Departments reporting to the Deputy Director are Exhibits and Programs, including Heritage Asset Collections, and Facilities and Security.

The four military positions, as a placeholder, are shown reporting to the Director, as they will represent the Coast Guard. As responsibilities for the military positions become more defined, who they report to can be adjusted.

Prior to the hiring of the Museum Director, all positions will report to the Deputy Director.

Table 23.2 is a hybrid of an organizational chart and the listing of some positions.

Museum Organizational Chart
National Coast Guard Museum

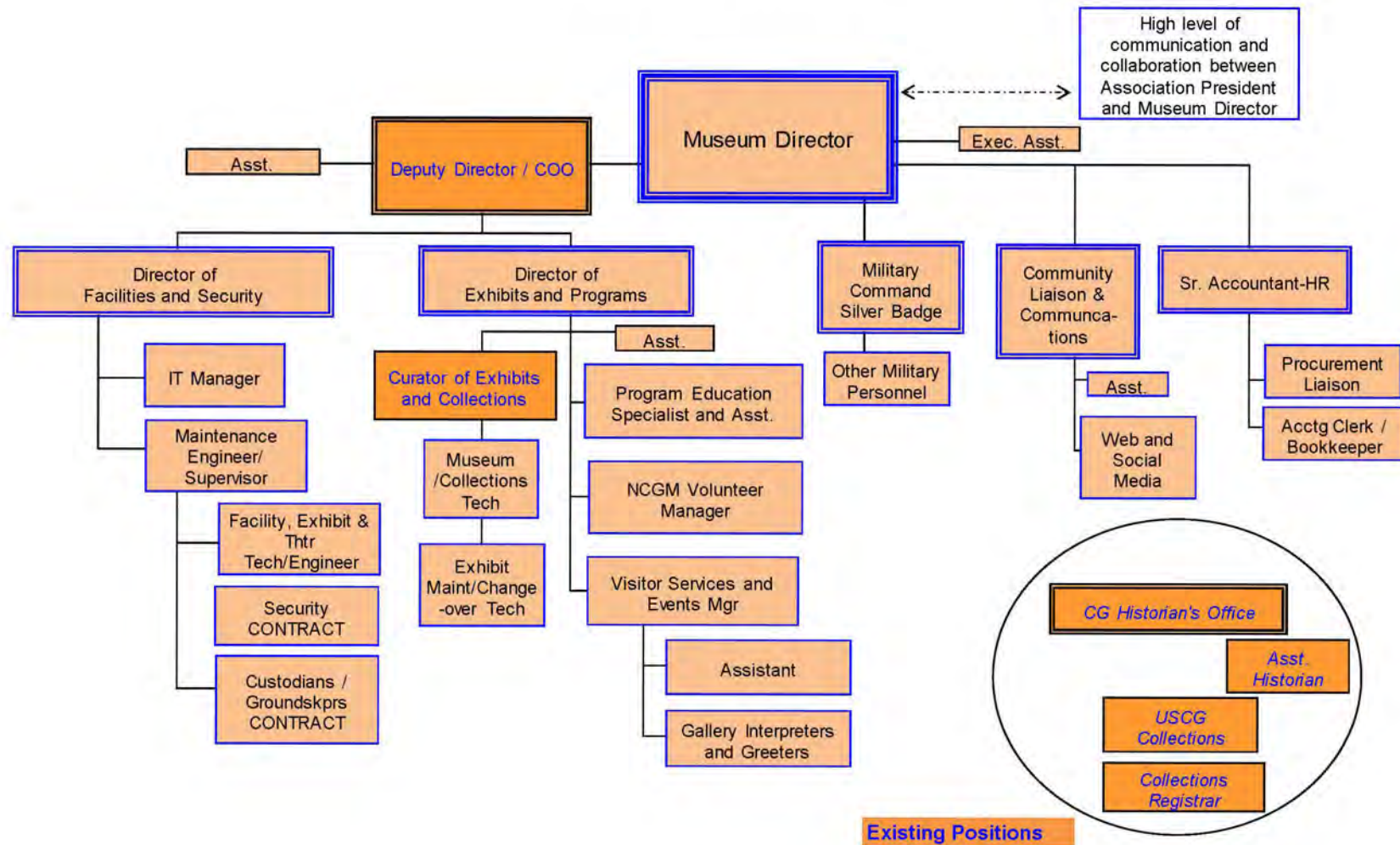


Table 23.2

Source: Coast Guard and White Oak Associates, Inc.

List of Staff Positions and Salaries

The staff list proposed in this *Addendum 2017* is for Coast Guard personnel and based on optimal staffing to provide a first class visitor experience and a well-run museum.

As in prior reports, the Museum Director, in addition to other responsibilities, will work closely with Association staff, provided all activities are within the guidelines for Coast Guard personnel regarding fund raising, marketing and attending fund raising events.

Salary and benefit costs are based on the staffing list in Tables 23.3. The salaries, in 2017 dollars, are based on the FY17 annualized Standard Personnel Costs (SPC) methodology, per the Excel document, provided by the Coast Guard Office of Budget Development for Operations, titled FY17_SPC_Memo_POSTED.xlsx.

The salaries assume that all new hires will be hired at Step 10, the highest Step. In the 2008 *Plan* and *Addendum 2014* salaries were based on a Step 5 level, the midpoint, from the locality pay scales for the Hartford-Willimantic, CT area. The CT area salaries were lower than those currently proposed, so there is a large increase in salary costs in this *Addendum 2017*.

The Museum is budgeted to have a total of 32.40 full-time equivalent (FTE) personnel, 28.40 civilian and four military.

The Curator position for Exhibits & Collections will be staffed by the existing Curator at the Coast Guard Museum at the Academy.

Docents and Volunteers

Volunteer docents are expected to play a role in supplementing staff. They can play a significant role as they do at the National Museum of the Marine Corps. The Marine Corps museum has a requirement of at least eight hours per month per volunteer. Some volunteers are so committed that they fly in to fulfill their requirement.

The Association of Science-Technology Centers conducts an annual survey of its members. In prior years they collected data on volunteers. In their 2012 survey 80 reporting science centers had an average of 732 volunteers each. The median number was 207. Average aggregate annualized hours were 21,400 but the median was 9,200. 9,200 hours translates to approximately 4.4 FTEs. The volunteers in the ASTC surveys are not just docents. They might include people helping with large-scale mailings and at special events. The economic model for the Museum assumes, in the early years, an average of 50 volunteers. There is a great opportunity to use volunteers as there are many retired Coast Guard personnel who live in the greater New London area.

As noted above, the Museum will need to comply with any regulations regarding the inclusion of volunteers, which may require the Association to be the initial liaison and overseer of volunteers, with the Museum managing their activities on-site.

Staffing Model

The staffing model in Table 23.3 is the recommended and optimal staff list. Salaries post opening total \$3,079,535 annually. The staffing model assumes weekend coverage during public hours as well as weekdays. Scheduling gallery interpreters and greeters and security labor should be staggered to cover all days open to the public.

The salaries are not intended for salary administration purposes, but merely as a guideline for budgeting.

Security, custodial/groundskeeping and seasonal gallery interpreters/greeters are included in the staff list but noted as contract labor.

USCG NCGM Staff List and Salaries
National Coast Guard Museum

	Rank/ Grade	Status	FTE's	Funding Source	Annual Salaries INCLUDING Benefits
ADMINISTRATION					(2017\$)
Museum Director	GS 15	FT perm	1.0	Civilian	\$ 208,632
Executive Assistant	GS 6	FT perm	1.0	Civilian	\$ 74,332
Deputy Director	GS 14	FT perm	1.0	Civilian	\$ 180,032
Assistant to the Deputy Director	GS 6	FT perm	1.0	Civilian	\$ 74,332
SR Accountant Liaison to USCG Hdqtrs (Acct, HR, Payroll)	GS 9	FT perm	1.0	Civilian	\$ 93,532
Procurement Liaison	GS 7	FT perm	1.0	Civilian	\$ 80,532
Acct. Clerk / Bookkeeper III	GS 5	PT perm	0.5	Civilian	\$ 34,066
Community Liaison and Public Relations	GS 12	FT Perm	1.0	Civilian	\$ 129,432
Community Liaison Assistant	GS 6	PT perm	0.5	Civilian	\$ 37,166
Web and Social Media	GS 7	FT perm	1.0	Civilian	\$ 80,532
Director of NCGM Facilities/Security	GS 13	FT perm	1.0	Civilian	\$ 153,732
Facility Maintenance Engineer/Supervisor	GS 9	FT perm	1.0	Civilian	\$ 93,532
Facilities Technician - Engineer (Thtr, Exhibits, Facility)	GS 7	FT perm	1.0	Civilian	\$ 80,532
Information Technology Manager	GS 12	FT perm	1.0	Civilian	\$ 129,432
Security Staff CONTRACT Labor				Contract	
Custodians/Groundskeepers CONTRACT Labor				Contract	
SUBTOTAL - ADMINISTRATION			13.00		\$ 1,449,816
EXHIBITS AND PROGRAMS					
Director Exhibits & Programs	GS 13	FT perm	1.0	Civilian	\$ 153,732
Administrative Assistant	GS 5	FT perm	1.0	Civilian	\$ 68,132
Curator of Exhibits & Heritage Asset Collections	GS 12	FT perm	1.0	Civilian	\$ 129,432
Museum/Collections Technician	GS 9	FT perm	1.0	Civilian	\$ 93,532
Exhibit Maint/Changeover Tech.	GS 7	FT perm	1.0	Civilian	\$ 80,532
Education Specialist: Programs	GS 9	FT perm	1.0	Civilian	\$ 93,532
Education Asst: Programs	GS 6	FT perm	1.0	Civilian	\$ 74,332
Visitor Services and Events Manager	GS 9	FT perm	1.0	Civilian	\$ 93,532
Visitor Services Assistant	GS 7	FT perm	1.0	Civilian	\$ 80,532
Volunteer Manager (docent Training)	GS 7	FT perm	1.0	Civilian	\$ 80,532
Volunteer Docents		Volunteers		Civilian	
Gallery Interpreters/Greeters/Floor Staff	GS 3	PT perm	5.4	Civilian	\$ 258,833
Gallery Interpreters/Greeters/Floor Summer CONTRACT				Contract	
Military Personnel:					
Military 1 Command Silver Badge	E-9	FT perm	1.0	Military	\$ 146,316
Military 2 Storekeeper	E-5	FT perm	1.0	Military	\$ 92,250
Military 3 Public Affairs Officer	E-5	FT perm	1.0	Military	\$ 92,250
Military 4 Yeoman	E-5	FT perm	1.0	Military	\$ 92,250
SUBTOTAL EXHIBITS & PROGRAMS			19.40		\$ 1,629,719
Other: Admin. flexible office, shipping/receiving, STEM Ctr.					
TOTAL USCG - CIVILIAN & MILITARY			32.40		\$ 3,079,535
Addendum 2014 (inflation-adjusted to 2017 dollars)			24.75		\$ 2,264,311
2008 Master Plan (inflation-adjusted to 2017 dollars)			22.40		\$ 2,091,522

Table 23.3

Source: Coast Guard Standard Personnel Cost Methodology FY17_SPC_Memo_POSTED.xlsx
and White Oak Associates, Inc.

Comparison of Staff Lists, 2008 Master Plan and Addenda

Table 23.4 compares staffing lists from the 2008 *Master Plan*, *Addendum 2014* and *Addendum 2017*.

Comparison of Staffing Lists (2008 Master Plan and Addenda)

National Coast Guard Museum

	Addend '17	2008 Plan	Addendum '14	Addendum '17
NCGM Position/Title	Status	FTE's		
ADMINISTRATION				
Museum Director	FT perm	1.0	1.0	1.0
Executive Assistant	FT perm	0.75	0.75	1.0
Deputy Director	FT perm			1.0
Assistant to the Deputy Director	FT perm			1.0
SR Accountant Liasion to USCG Hdqtrs (Acct. HR, Payroll)	FT perm	1.0	1.0	1.0
Procurement Liaison	FT perm			1.0
Acct. Clerk / Bookkeeper	PT perm	0.5		0.5
Community Liaison and Public Relations	FT Perm	1.0	1.0	1.0
Community Liaison Assistant	PT perm			0.5
Web and Social Media	FT perm		1.0	1.0
Director of NCGM Facilities/Security	FT perm	1.0	1.0	1.0
Facility Maintenance Engineer/Supervisor	FT perm			1.0
Facilities Technician - Engineer (Thtr, Exhibits, Facility)	FT perm	1.0	1.5	1.0
Information Technology Mgr.	FT perm	1.0	1.0	1.0
Security Staff CONTRACT Labor		1.5	1.5	contract
Custodians / Groundskeepers CONTRACT Labor		2.8	3.0	contract
SUBTOTAL - ADMINISTRATION		11.55	12.75	13.00
EXHIBITS, COLLECTIONS, PUBLIC PROGRAMS & EVENTS				
Director Exhibits & Programs	FT perm	1.0	1.0	1.0
Administrative Assistant	PT perm	0.5	0.5	1.0
Curator of Exhibits & Collections	FT perm	1.0	1.0	1.0
Museum/Collections Technician	FT perm			1.0
Exhibit Maint/Changeover Tech	FT perm	1.0	1.0	1.0
Education Specialist: Programs	FT perm	1.0	1.0	1.0
Education Asst: Programs	FT perm	0.5		1.0
Visitor Services and Events Manager	FT perm	1.0	1.0	1.0
Visitor Services Assistant	FT perm			1.0
Volunteer Manager (docent Training)	FT perm	1.0	1.0	1.0
Gallery Interpreters/Greeters/Floor Staff	PT perm	2.8	5.5	5.4
Military Personnel:				
Military 1 Command Silver Badge	FT perm			1.0
Military 2 Storekeeper	FT perm			1.0
Military 3 Public Affairs Officer	FT perm			1.0
Military 4 Yeoman	FT perm			1.0
SUBTOTAL EXHIBITS & PUBLIC PROGRAMS		9.80	12.00	19.40
SUBTOTAL USCG - CIVILIAN & MILITARY		21.35	24.75	32.40
Salaries w. Benefits (all in 2017\$)				
		\$2,091,522	\$ 2,264,311	\$3,079,535

Table 23.4

Source: Coast Guard Standard Personnel Cost Methodology, FY17_SPC_Memo_POSTED.xlsx
and White Oak Associates, Inc.

Seasonality

It is possible to have short-term staff appointments, which will be helpful when additional staff is needed in the peak summer months of June, July and August. Spring and fall are referred to as the “shoulder” months, as they have the next highest monthly attendance numbers. The winter months will have much lower attendance. Operating hours will be adjusted seasonally (see Chapter 16, “Five Year Operating Profile”). During the winter months the Museum will be closed on non-holiday Mondays. Except for staff such as gallery interpreters and greeters, staff will work on Mondays that are closed to the public, unless they are Museum staff holidays.

In the low attendance winter months there will still be 32.4 FTE staff. That includes 5.4 full-time equivalent gallery interpreters/greeters plus the military personnel, some of whom might be in the galleries as well. In addition to security at the entrance to the Museum, one security guard will be stationed on each gallery floor. In the winter months this would be too much staff. There are several ways to address this. One option is to change the responsibilities of the military staff during those months or re-locate them and bring on new enlisted personnel in the spring, meaning enlisted personnel would be at the Museum spring through fall, although the current budget assumes they are year round.

Another option is to convert some of the gallery interpreters, in the slower winter months, to serve as outreach staff and present educational programs to schools, community centers, etc. That would need to be coordinated with the Association, which will also be running programs. And some of the gallery staff would need to be at a high enough level to have those skills or be trained.

Since security and custodial staff will be contracted out it will be possible to cut back their hours in the winter.

It would be beneficial to have a marketing campaign to attract more area residents and groups during the off-seasons. As other museums do, the Association could offer incentives to school and other groups to attend in months other than the normal peak months for school visitation of April and May.

Hourly rates for custodial and grounds personnel were taken from the document, Hourly Wages WDR 2015-4111 Rev 3 updated 5/8/2017 and posted 5/16/2017. Health and welfare costs of \$4.27, as shown in the same document, were added to the hourly rate. The rates were for the New London area.

Staff Computer Needs

Table 23.5 indicates the number of computers needed for Coast Guard staff. The majority would be desktops. It is too early to decide which might be laptops. The total number of computers needed is 32. In addition, at least one laptop may be needed for staff to take to the off-site storage space when they have work to do there.

Most of the computers are assigned to specific staff. Six additional computers are needed:

- 2 for the security monitoring room (one for monitoring cameras and another for monitoring weather and other tasks)
- 1 computer in the volunteer lounge, to be used for scheduling
- 1 in the shipping/receiving area

- 1 in the flexible office space in the administration area
- 1 in the support space off the STEM Learning Center, for education staff when they are delivering programs

Computer needs are for Coast Guard personnel only and do not include Association staff even though some Association staff may be working on-site. For example, the store manager has an office near the store and an education staff person, when delivering programs on-site would share the support area off the STEM Learning Center. The Association will, at times, have cashiers and ushers on-site for evening and other programs, including at the Feature Theater. The cashiers and ushers do not need desks or offices. The computer needs presented here do not include computers that will be purchased as part of a ticketing system or for cash handling in the store and for admissions.

Personnel and Space and Computer Needs
National Coast Guard Museum

ADMINISTRATION	Computers
Museum Director	1
Executive Assistant	1
Deputy Director	1
Assistant to the Deputy Director	1
SR Accountant Liaison to USCG Hdqtrs (Acct, HR, Payroll)	1
Procurement Liaison	1
Acct. Clerk / Bookkeeper III	1
Community Liaison and Public Relations	1
Community Liaison Assistant	1
Web and Social Media	1
Director of NCGM Facilities/Security	1
Facility Maintenance Engineer/Supervisor	1
Facilities Technician - Engineer (Thtr, Exhibits, Facility)	1
Information Technology Manager	1
Security Staff CONTRACT Labor	2
Custodians/Groundskeepers CONTRACT Labor	
SUBTOTAL - ADMINISTRATION	
EXHIBITS AND PROGRAMS	
Director Exhibits & Programs	1
Administrative Assistant	1
Curator of Exhibits & Heritage Asset Collections	Academy
Museum/Collections Technician	Academy
Exhibit Maint/Changeover Tech.	1
Education Specialist: Programs	1
Education Asst: Programs	1
Visitor Services and Events Manager	1
Visitor Services Assistant	1
Volunteer Manager (docent Training)	1
Volunteer Docents	1
Gallery Interpreters/Greeters/Floor Staff	None
Gallery Interpreters/Greeters/Floor Summer CONTRACT Staff	None
Military Personnel:	
Military 1 Command Silver Badge	1
Military 2 Storekeeper	1
Military 3 Public Affairs Officer	1
Military 4 Yeoman	1
SUBTOTAL EXHIBITS & PROGRAMS	
Other: Admin, flexible office, shipping/receiving, STEM Ctr.	3
TOTAL USCG - CIVILIAN & MILITARY	32

Table 23.5

Source: White Oak Associates, Inc.

Pre-Opening Staff and Associated Costs

All staff will need to be on board before opening day - some as little as three months before, such as Museum and Gallery greeters, and others much earlier. The Deputy Director is already on staff, as is the Curator, who is at the Coast Guard Academy.

The positions that should be in place soon and budgeted for 2018 include:

- Museum Director
- Procurement Liaison (for contracting)
- Director of Facility and Security, who will oversee the architectural design through construction

- Director of Exhibits and Programs to oversee the exhibit design process
- Education Specialist to oversee the education committee and the development of programs

The dates shown in Table 23.6 are for when staff should be on board. That means the hiring process needs to start early enough to get the staff in place by the recommended dates. The recommended hiring dates for 2018 reflect that the Association has reported they have raised the funds needed for the architect to proceed with Design Development.

Any staff hired at a managerial level must either have expertise in the area they are overseeing or have the ability to hire contract labor, if needed, until a full-time person is hired. For example, the Director of Exhibits and Programs may be stronger in exhibits than in programming. If the person who has expertise in education programs is not on board soon enough the Director needs to have the ability to hire contract labor to meet those needs. The pre-opening staff list presented in this report assumes personnel are hired in a timely manner and that interim contract labor will not be needed.

Pre-Opening Staff Hiring Dates and Monthly Salaries
National Coast Guard Museum

	Months Pre Opening	# Days Pre open	Date Position Starts	Monthly Rate w Benefits
ADMINISTRATION	Opening Date May 28, 2022			
Museum Director	48	1454	6/4/2018	\$ 17,386
Executive Assistant	14	420	4/3/2021	\$ 6,194
Deputy Director	65	1950	1/24/2017	\$ 15,003
Assistant to the Deputy Director	14	420	4/3/2021	\$ 6,194
SR Accountant Liaison to USCG Hdqtrs (Acct, HR, Payroll)	10	300	8/1/2021	\$ 7,794
Procurement Liaison	48	1454	6/4/2018	\$ 6,711
Acct. Clerk / Bookkeeper III	6	180	11/29/2021	\$ 2,839
Community Liaison and Public Relations	18	540	12/4/2020	\$ 10,786
Community Liaison Assistant	8	240	9/30/2021	\$ 3,097
Web and Social Media	16	480	2/2/2021	\$ 6,711
Director of NCGM Facilities/Security	48	1454	6/4/2018	\$ 12,811
Facility Maintenance Engineer/Supervisor	10	300	8/1/2021	\$ 7,794
Facilities Technician - Engineer (Thtr, Exhibits, Facility)	6	180	11/29/2021	\$ 6,711
Information Technology Manager	6	180	11/29/2021	\$ 10,786
Security Staff CONTRACT Labor	6	180	11/29/2021	
Custodians/Groundskeepers CONTRACT Labor	6	180	11/29/2021	
EXHIBITS AND PROGRAMS				
Director Exhibits & Programs	48	1454	6/4/2018	\$ 12,811
Administrative Assistant	12	360	6/2/2021	\$ 5,678
Curator of Exhibits & Heritage Asset Collections	12	360	6/2/2021	\$ 10,786
Museum/Collections Technician	3	90	2/27/2022	\$ 7,794
Exhibit Maint/Changeover Tech.	6	180	11/29/2021	\$ 6,711
Education Specialist: Programs	48	1454	6/4/2018	\$ 7,794
Education Asst: Programs	2	60	3/29/2022	\$ 6,194
Visitor Services and Events Manager	9	270	8/31/2021	\$ 7,794
Visitor Services Assistant	4	120	1/28/2022	\$ 6,711
Volunteer Manager (docent Training)	9	270	8/31/2021	\$ 6,711
Volunteer Docents				
Gallery Interpreters/Greeters/Floor Staff	3	90	2/27/2022	\$ 21,569
Gallery Interpreters/Greeters/Floor Summer CONTRACT	3	90	2/27/2022	
Military Personnel:				
Military 1 Command Silver Badge	3	90	2/27/2022	\$ 12,193
Military 2 Storekeeper	3	90	2/27/2022	\$ 7,688
Military 3 Public Affairs Officer	3	90	2/27/2022	\$ 7,688
Military 4 Yeoman	3	90	2/27/2022	\$ 7,688

Table 23.6

Source: Coast Guard and White Oak Associates, Inc.

Pre-Opening Non Staff Costs

In addition to staff pre-opening costs there will be non-staff pre-opening costs associated with personnel. Those costs have been estimated at 30% of personnel costs in 2018 and 2019, 35% in 2020 and 40% in 2021 and 2022 until opening.

Staff pre-opening costs from 2017 through opening day in May 2022, in 2017 dollars, total \$5,149,403 and non-staff costs \$1,797,339 resulting in total pre-opening staff and related costs of \$6,946,743. Non-staff costs will include, among other items, the leasing of off-site offices and associated utilities and cleaning costs, office supplies, mailing, utilities, Internet, phones, computer maintenance, printing and mailings, etc.

It has not yet been identified when offices in New London will need to be set up. With the addition of much more staff in 2021 temporary off-site offices in New London will probably need to be set up in 2020. Purchasing of equipment and computers that will move to the Museum should be covered by the pre-opening operating and capital budget. Costs associated with the development of programs and exhibits are also covered by the capital budget.

No non-staff costs are allocated to supporting the building prior to opening since the Coast Guard will not be accepting the building before May 28, 2022, the currently anticipated opening day.

There is a line-item in the capital budget for pre-opening costs, which includes the salaries and expenses from 2017 through 2020 as shown in Table 23.7. Staff costs through 2020 will be requested via the Resource Proposal Process. Additional funds for all staff, overhead, and New London office space and associated costs, will be needed in 2021 and through May 2022 as the balance of the Museum staff will be hired prior to opening day.

Staff and Associated Pre-opening Costs by Calendar Year (2017\$)

National Coast Guard Museum

Calendar Year	Cumulative # FTEs	Pre-Opening Staffing	Pre-open Non-Staff Costs OH Rate	Amount	Totals
In Capital and Pre-Opening Budget requested via Resource Proposal Process					
2017	1	\$ 180,032	0	\$ -	\$ 180,032
2018	6	\$ 582,625	30%	\$ 174,788	\$ 757,413
2019	6	\$ 870,192	30%	\$ 261,058	\$ 1,131,250
2020	7	\$ 902,550	35%	\$ 315,893	\$ 1,218,443
SUBTOTAL				\$ 751,738	\$ 3,287,137
Additional Funds needed Pre-Opening					
2021	21	\$ 1,472,492	40%	\$ 588,997	\$ 2,061,488
to May 2022	32.40	\$ 1,141,512	40%	\$ 456,605	\$ 1,598,117
SUBTOTAL				\$ 1,045,602	\$ 3,659,606
TOTAL		32.40	\$ 5,149,403	\$ 1,797,339	\$ 6,946,743

Table 23.7

Source: Coast Guard and White Oak Associates, Inc.

Risk Mitigation

Pre-Opening Hiring of Staff

There is the risk that the Coast Guard will bring on staff early and the project gets delayed, thus extending the amount of time new staff and associated costs need to be paid. One way to mitigate that is to coordinate the hiring dates with the Key Decision Points (KDPs) (see Chapter 25, Table 25.1). KDPs #1 and #2 have already been met, having cash on hand to complete Schematic Design and Design Development.

KDP #6 (target date of October 2018) is enough cash in-hand with pledge financing in place to complete Construction Documents (CD). KDP #21, the last one, is the Coast Guard's acceptance of the building.

One concern in coordinating hiring with the KDPs is that the process for hiring new personnel at the Coast Guard takes a long time and the process may need to start before the KDPs are met. At the same time, the majority of staff do not come on board until 2021. Six staff are budgeted to be added in 2018, none in 2019 and one in 2020. Fourteen are to be added in 2021, well after funds will have been raised to break ground and start Construction. If needed the Coast Guard could consider hiring contract labor to oversee parts of the project until a staff person can be hired full-time. For example, overseeing the operating facility through at least Design Development could be handled by a contractor who has experience in museum buildings and operations and/or another contractor that has expertise in security systems.

Capital Phase Schedule and Benchmarks

National Coast Guard Museum

Addendum 2017 to Chapter 25



This chapter of the Museum's *Strategic Master Plan* (the *Plan*) describes the shared assumptions related to the implementation schedule. This addendum addresses only aspects that have changed enough to merit changes to the *Plan*, which, for this chapter include new target opening dates and key decision points.

The design and construction of the Museum project is directly affected by the pedestrian overpass, new ferry terminal, waterfront and City improvements, and indirectly affected by abutters, like Amtrak, the railroad station, and local businesses and residents. Many factors such as funding, design and permitting need to align in time and intent.

Changes Relative to Capital Phase Schedule and Benchmarks

- The NEPA environmental studies are underway and scheduled to be finished by the end of 2018.

- The Coast Guard has received funding to start work on the Visitor Experience Zone(also known as The Exhibits).
- The Association hopes for a 2022 opening, and so this *Addendum* assumes a 2Q 2022 opening. This means the first "Typical Stable Year" is assumed to be 2025 in the fourth year of operation.
- Key decision points (KDPs) are identified (see Table 25.1).

Phases and Schedule

The *phase schedule* developed in the next table provides a current time framework for the Museum's implementation. While many teams will be working at the same time, the phase's name reflects the activity that is on the critical path at that time. Responsibility for the critical path will shift among the teams critical to launching a successful institution, but all teams are active in all phases.

In reality, both the Coast Guard and the Association will be responsible for different aspects, and this division of responsibility is still being determined. At this time, it is unclear whether the division of responsibility will speed up (by double-tracking) or slow down (by funding delays) a normal implementation timetable. Hence, the schedule in Table 25.1 assumes one project centrally and sequentially managed.

To mitigate risks, the schedule includes *key decision points (KDPs)*, which are go/no-go milestones, typically based on having achieved a specific progress goal. Managers should link their secondary decisions points to these KDPs. Issuing a formal job offer, for instance, should be after achieving some pre-identified KDP.

The idea that the Association can turn over a completed, debt-free Museum to the Coast Guard on opening day is a clear objective, but one that needs more flexibility, as turn-over is likely to be a period of time, not a single day because: Building and exhibit punch-lists are seldom closed out on opening; final contractor payments may be held pending warranty fulfillment; federal and private foundation grants often require post-opening evaluation and documentation by the grantee; donor pledge payments may extend beyond opening, and vendors and abutters may have open business and/or issues.

Critical Path Phases and Key Decision Points (KDPs) -- Preconstruction

National Coast Guard Museum

#	PHASE	ON CRITICAL PATH	LENGTH	DATE Complete
1	Preliminary Research & Planning	NCGM Association	Complete	
2	<i>Strategic Master Plan</i>	Museum Planner	Complete	
3	Site Selection and Concept Design	Site Planning Team	Complete	
4	<i>Addendum '14 to the Master Plan</i>	Museum Planner	Complete	
5	Permit 1: MOA Agreements	Museum Assoc./USCG/City	Complete	
6	Site Development Plan	Architect	Complete	
	Lead Funding & Organization	Investment Team	Complete.	
	Campaign Research & Plan	Investment Team	Complete.	
	State Overpass: Bonded \$500K	Investment Team	Complete	2014
KDP 1	Federal Funding Appropriation	USCG	Complete	05/30/17
KDP 2	Funding Goal 1: SD	Investment Team	Complete	10/13/17
	FY 20 CG Resource Allocation	USCG	Milestone	04/30/18
	State Overpass: Bonded \$1.8 M	Investment Team	Milestone	03/30/18
7	Schematic Design	Architect	Complete	05/15/18
	<i>Addendum '17</i>	Museum Planner	Complete	05/15/18
KDP 3	Review Schematic Design	USCG	Milestone	05/30/18
KDP 4	Funding Goal 2: DD	Investment Team	Milestone	05/30/18
8	Design Development	Architect/Exhibit Designer	5 Months	10/30/18
KDP 5	NTP 1: Visitor Experience Design	Program Team	Milestone	05/30/18
	FY 20 RP submission to OMB	USCG	Milestone	08/30/18
	Visitor Experience: SD	Program Team	(5 months)	10/30/18
KDP 6	Funding Goal 3: CD	Investment Team	Milestone	10/30/18
	FY21 Museum RP due to RMO	USCG	Milestone	11/30/18
KDP 7	Review Design Development	USCG	Milestone	11/30/18
KDP 8	Permit 2: Complete NEPA study	Building Team	Milestone	12/31/18
	Visitor Experience: DD	Program Team	(5 months)	03/30/19
9	Construction Documents	Architect	4 Months	03/30/19
	Visitor Experience: CD	Program Team	(7 months)	10/30/19
KDP 9	Review Construction Documents	USCG	Milestone	04/30/19

Table 25.1a (1 of 2)

Source: National Coast Guard Museum Association, Payette, United States Coast Guard and White Oak Associates

Critical Path Phases and Key Decision Points (KDPs) -- Construction to Opening
National Coast Guard Museum

#	PHASE	ON CRITICAL PATH	LENGTH	DATE Complete
KDP 10	Funding Goal 4: Site Preparation	Investment Team	Milestone	04/30/19
	State Overpass: Bonding Balance	Investment Team	Milestone	04/30/19
10	Construction Bids & Awards	Building Team	2 Months	06/30/19
KDP 11	Permit 3: Site	Building Team	Milestone	06/30/19
KDP 12	Funding Goal 5: Construction	Investment Team/USCG	Milestone	06/30/19
	Construction Go/No-go	USCG/NCGMA	Milestone	06/30/19
11	Groundbreaking	Contractor	Milestone	06/30/19
	Site and Bulkhead	Contractor	2 Months	08/30/19
KDP 13	Permit 4: Construction	Building Team	Milestone	08/30/19
12	Building Construction	Contractor	28 Months	12/31/21
KDP 14	Funding Goal 6: Program	Investment Team	Milestone	09/30/19
KDP 15	NoP 2: VE Fabrication	Program Team	Milestone	09/30/19
KDP 16	NoP 3: Film & Theater	Program Team	Milestone	10/30/19
KDP 17	Funding Goal 7: Complete	Investment Team	Milestone	10/31/21
KDP 18	Building Ready for VE Installation	Contractor	Milestone	12/31/21
13	Installation of VE	Program Team	5 Months	05/28/22
	Shakedown	Operations Team	20 Days	04/29/22
	Previews	Investment Team	10 Days	05/18/22
KDP 19	Permit 5: Occupancy	Building Team	Milestone	05/28/22
KDP 20	Public Launch	Public Relations	Milestone	05/28/22
	Start Operations	Operations Team	On-going	
KDP 21	Gift of the Museum Accepted	USCG	Milestone	05/28/22
14	Summative Evaluation	Museum Planner	+ 4 Months	09/28/22
15	Typical Stable Year	Operations Team	+	2025

Table 25.1b (2 of 2)

Source: National Coast Guard Museum Association, Payette, United States Coast Guard and White Oak Associates

Capital Budget and Pre-Opening Operating Costs

National Coast Guard Museum

Addendum 2017 to Chapter 26

This chapter of the Museum's *Strategic Master Plan* (the *Plan*) describes the shared assumptions underlying the capital and pre-opening operating budget "the Startup Budget."

Changes Relative to the Capital and Pre-Opening Operating Budget

- Four years of inflation and cost escalation have happened since 2013.
- The budgets in this report are in 2017\$ as they are based on 2016-2017 data. Since opening is forecast for 2022, with construction to start in 4Q 2019, the mid-point for construction will be 1Q 2021, which results in 3 years of inflation to be added to these 2017\$ to the capital costs and 8 years to the stable operating year figures.
 - The Association's construction cost estimate is an exception, as it is in 2019\$ and accounts for escalation.
- The NCGMA now has full-time professional staff and an office. The Association has taken over the Startup Budget and is developing new numbers replacing the 2013 budget. Where the Association and its contractors have worked on new numbers, those have been added; where no new numbers have been provided, the 2013 numbers have been factored for inflation and for adjustments in program.
- The cost of the project has increased because more is included in the Startup Budget: the \$20M bridge; an increase in the pre-opening operating costs for the Association; including the Coast Guard pre-opening staffing costs; outfitting new components; a larger building, and inflation.
- Funding sources are still being explored and developed both on the private and public side. Both sources of funds will bring restrictions, currently unknown. The sources of funds must allow the intended uses (allocations) of the funds, but there is bound to be considerable flexibility in scopes, control, scheduling and definitions to accommodate the needs of donors and public agency funders. At this stage, the allocation of funds is presented as an integrated, centrally managed budget, with the understanding that future discussion is needed before separating it into appropriated and non-appropriated funds, or into Association and Coast Guard sources.

Overview of the Capital and Pre-Opening Operating Budget (Allocation of Funds)

The Capital and Pre-Opening Operating Budget (the "Startup Budget" as distinct from the "Operating Budget") summarized in Tables 26.1, compared to past budgets in Table 26.1 and detailed in Table 26.3 is a recommended *allocation of funds*, given the Museum's conceptual framework and plans as described in this *Addendum 2017*. The responsibility for managing the

spending of these funds will be delegated, first to either the Association or to the Coast Guard and then to their *task managers*, who may be contractors, such as building contractors and exhibit producers. Clarifying this division is an upcoming task; for now, the Startup Budget is integrated.

The Startup Budget assumes that its total equals the net amount generated by the capital campaign run by the Association and that any restrictions align with what is described in this document. In short, that the *sources of funds* align with the *allocation of funds* in Table 26.3. Raising this money and achieving this alignment is the Association's business, and not the Coast Guard's. The Coast Guard, however, needs to consider the risk that this alignment will not happen, and that risk is articulated in Chapter 28 "Risks and Mitigations."

Not everyone will regard all items in the Startup Budget as "capital" expenses, in the strict definition of the term. Some categories include pre-opening operating expenses and on-going cash and unrestricted funds. However, the total budget attempts to identify all the Museum's expenses needed before opening day, when the Museum's operating budgets take over. If the capital budget is reduced, or the broad money allocations shifted significantly, operating results are also likely to be reduced.

It is important to recognize that the Startup Budget is a strategic allocation of funds, and not a specific estimate of expenses in each area. Nothing is designed yet, so nothing can be priced, and the overarching management task is to get everyone to design and fabricate within budget.

The Startup Budget is at an optimal level for success at a reasonable, but not excessive quality. It collects into one budget estimates from the Association and other sources.

All expenses incurred prior to opening have to fit into one or more of the existing line items. If new categories of expenses are created, then other existing line items must be reduced, as the total Capital Budget should not be increased without the Association's approval.

For historical comparisons to previous budgets, please see "Executive Summary" page xix.

Summary Startup Budget: 2017\$
National Coast Guard Museum

Building Contract	\$62,811,501
Building Associated	\$12,562,300
Overpass	\$20,000,000
Museum Equipment	\$2,057,500
Indoor Program Costs	\$23,972,156
Project Management	\$13,689,137
Museum Funds	\$1,721,690
TOTAL	\$ 136,814,285

Table 26.1

Source: National Coast Guard Museum Association, United States Coast Guard, Payette and White Oak Associates

Comparison to Previous Startup Budgets
National Coast Guard Museum

	2008	2014	2017	Variance '14-'17
Building Contract	\$30,782,130	\$51,885,000	\$62,811,501	\$10,926,501
Building Associated	\$8,525,122	\$9,634,100	\$12,562,300	\$2,928,200
Overpass			\$20,000,000	\$20,000,000
Museum Equipment	\$1,513,000	\$1,382,000	\$2,057,500	\$675,500
Indoor Program Costs	\$14,640,065	\$11,791,500	\$23,972,156	\$12,180,656
Project Management	\$4,440,000	\$3,390,000	\$13,689,137	\$10,299,137
Museum Funds	\$5,284,533	\$2,250,884	\$1,721,690	(\$529,194)
TOTAL	\$65,184,850	\$80,333,484	\$136,814,285	\$56,480,801

Table 26.2

Source: National Coast Guard Museum Association, United States Coast Guard, Payette and White Oak Associates

Reasons for Changes: 2008-2017

Since 2008 and 2013, the project has increased in scope, impact and cost. The following changes and additions are the reasons for the increases:

- Overpass added (\$20M)
- Startup costs calculated: Coast Guard (\$3.2M) NCGMA (\$10.4 M)
- Larger building with more activities and components (+\$10.9M)
- Soft costs indexed to construction (+2.9M)
- Higher and more exhibit and program costs (+\$12.1M)
 - STEM Learning Center added
 - Feature film (\$4M) and theater equipment added
 - Exhibit costs per sq. ft. increased to be more interactive
- Previous budgets capped @ \$65M & \$80M, resulting in sub-par allocations
 - Restored budgets to good quality levels
- Inflation – 4 years since 2013; 9 years since 2008

Startup Budget: 2017\$ (v 6.3)

National Coast Guard Museum

	FN	Unit Cost	Amount	Area Total	Dept. Total
BUILDING CONTRACT					
	1,2,3				
Construction Costs: Base Building	4	\$919,30	68,325	\$62,811,501	
Building Allowances				incl	
Gray Bucket: Exhibit Utility Connections				incl	
Exhibit Lighting Infrastructure				incl	
All Networking and IT Support				incl	
Curb cuts, Sidewalks				by others	
Remediation				incl	
Building and Site Signs & Graphics				incl	
Change Orders				incl	
Landscaping, Bulkhead and Exterior Facilities				incl	
Site Demolition and Preparation				incl	
Site Utilities				incl	
Abutting Site Preparation				by others	
Air Monitoring				incl	
Soil Removal & Disposal				incl	
Decks & Patios (Waterview Terrace)				deleted	
Signs & Graphics				incl	
Equipment Systems				incl	
Special Lighting				incl	
Lighting & Control (except theaters and galleries)				incl	
Kitchen & Catering Equip (built-in only)				incl	
USCG Building Security Systems				incl	
Access and Key Systems				incl	
Building Audio (PA) System				incl	
General Conditions				incl	
GC's P&P Bond				incl	
GC's Fee				incl	
Design Contingency				incl	
Escalation (construction)				incl	
Building Contingency for Non-Discretionary Items				incl	
Building Contingency for Owner Discretionary Items				incl	
SUBTOTAL BUILDING	46%				\$62,811,501
BUILDING ASSOCIATED	5			\$12,562,300	
Land				\$0	
Architectural Search				\$0	
Site Development Plan (Museum's portion)				incl	
Title Work & Recording				incl	
Site Survey and Other Studies				incl	
Test Borings & Geotech				incl	
Engineering & Environment				incl	
Geotechnical & Materials Testing				incl	
Engineering & Environment Due Diligence				incl	
Architecture & Engineering				incl	
Reimbursable Exps				incl	
Consultants/Special Services				incl	
LEED Design Consultants				incl	

Table 26.3 (1 of 4)

Source: National Coast Guard Museum Association, United States Coast Guard, Payette and White Oak Associates

Startup Budget: 2017\$ (v 6.3)

National Coast Guard Museum

	FN	Unit Cost	Amount	Area Total	Dept. Total
Building Project Management				incl	
Reproduction Costs				incl	
Museum Program Interface Specs.	8			in program	
Permitting & Approvals Consultant				incl	
Permitting & Approvals Legal				incl	
Fees, Permits, Taxes & Titles				incl	
Inspections				incl	
Appraisals & Review				incl	
Legal and Accounting				incl	
Builder's Risk Insurance				incl	
LEED Commissioning Agent				tbd	
Utility Tap Fee Allowance				incl	
Utility Co. Impact fees				incl	
SUBTOTAL ASSOC.	9%		20%		\$12,562,300
OVERPASS NOT TO EXCEED	6				\$20,000,000
	15%				
MUSEUM EQUIPMENT					
Furniture & Fixtures	9			\$185,000	
MIS Network, Computers & Software	9,10			\$225,000	
Other Office Systems	9			\$95,000	
Telephone System	9			\$125,000	
Visitor Service Equip.				\$10,000	
Ticketing & Visitor Information System				\$125,000	
Additional Audiovisual Systems (Moveable A	11			\$75,000	
Additional Security Systems & Cash Handling	12,13			\$125,000	
Bldg Maintenance Equip.				\$75,000	
Storage Units/Shelving/Cages				\$7,500	
Grounds Maintenance Equip.				by others	
Additional Interior Signs (eg. donors)	15			\$225,000	
Uniforms & Badges				\$15,000	
Bicycle Racks, Trash Cans, Outdoor Furn.				\$25,000	
Museum Store & Food Service	14				
Professional Services				\$35,000	
Merchandising FFE				\$95,000	
Décor, Graphics and & Environ				\$225,000	
Opening Inventory				operations	
Proprietary Merchandise Development				\$65,000	
Food Service				\$225,000	
Table & Chairs				\$15,000	
Decor & Environ.				\$85,000	
Vending Area				by others	
Special Event Catering Equip				see Event Ctr.	
SUBTOTAL EQUIP	2%				\$2,057,500

Table 26.3 (2 of 4)

Source: National Coast Guard Museum Association, United States Coast Guard, Payette and White Oak Associates

Startup Budget: 2017\$ (v 6.3)
National Coast Guard Museum

	FN	Unit Cost	Amount	Area Total	Dept. Total
PROGRAM COSTS	16				
Visitor Research and Evaluation	16			\$175,000	
Exhibit and Program Master Plan	16			\$250,000	
Theater Study/Plan	16			\$35,000	
Content Research for Label Copy	16			\$175,000	
Label Copy	16			incl	
Installation Expenses	16			\$150,000	
Travel & Expenses	16			\$100,000	
Management & Coordination	16			\$175,000	
Owner Furnished Items	16			\$50,000	
Rights and Object Acquisition	16			incl	
Label and Small Graphic Production	16			incl	
Program Integration with Architecture	8,16			\$250,000	
Exhibit Lighting	16			\$325,000	
Contingency	16	5%	22,830,625	\$1,141,531	
COMPONENTS and SPACES					
Lobby & Atrium	16	2,410		\$1,250,000	
Museum Galleries: Five Wings	16	23,925	\$425	\$10,168,125	
Feature Theater	16	2,800			
Projection System	16			\$850,000	
Screen	16			\$225,000	
Seating (150 @ \$250)	16			\$37,500	
Furnishings & Supplies	16			\$75,000	
Lobby Treatment	16			\$65,000	
Goods/Services/Other	16			\$50,000	
Signature Film	16			\$4,000,000	
Initial Programming	16			\$60,000	
Introductory Theater Equip	16			combined	
Introductory Theater Show	16			combined	
Changing Exhibit Gallery	16	1,500		\$100,000	
Art Gallery Initial Exhibition	16			\$50,000	
Coast Guard Live!	16			deleted	
Motion Simulator Ride (concession)	16			deleted	
Circulation Area Exhibits	16	8,475		\$150,000	
CG Exhibit	16			\$175,000	
STEM Learning Center					
The Commons				\$75,000	
Themed Program Labs				\$600,000	
Early Learning Center				\$350,000	
Other Learning Center Set-up Costs				\$50,000	
Simulator Stations and Programs				\$1,500,000	
Event Center					
Media and other equipment				\$350,000	
Tables, chairs, etc				\$75,000	
Décor and environment				\$100,000	

Table 26.3 (3 of 4)

Source: National Coast Guard Museum Association, United States Coast Guard, Payette and White Oak Associates

Startup Budget: 2017\$ (v 6.3)

National Coast Guard Museum

	FN	Unit Cost	Amount	Area Total	Dept. Total
Lecture Hall					
Media and other equipment				combined	
Tables, chairs, etc				combined	
Web Site & Digital Outreach Development				\$350,000	
Collections Handling for Exhibits	16,17,18			\$150,000	
Moving the New London Collection	17			deleted	
Exh & Program Tools/Maint Equip					
Exhibit Shop				\$65,000	
Print & Graphics Workshop				\$45,000	
Maint Equip (fork lifts, etc)				\$90,000	
In-Gallery Promotional Facilities				\$90,000	
SUBTOTAL PROGRAM	18%		39,110		\$23,972,156
SUBTOT CAP COSTS					\$121,403,457
PROJECT MANAGEMENT					
Association Pre-opening Costs	19			\$10,402,000	
USCG Pre-opening staff and Overhead	20			\$3,287,137	
Organizational Costs				assumed incl.	
Owner's Liability Insurance				assumed incl.	
Branding Costs				assumed incl.	
Pre-Opening Operat'g Supp't				assumed incl.	
Capital Campaign Costs				assumed incl.	
Marketing Launch Costs				assumed incl.	
Bridging Interest Costs				assumed incl.	
Moving & Set-up				assumed incl.	
Planning Fees & Studies	21			assumed incl.	
SUBTOTAL MGMT.	10%				\$13,689,137
SUBTOT CAPITAL & START-UP					\$135,092,594
MUSEUM FUNDS					
Escalation Reserve on non-Building	22	3 yrs.	1.9%/yr	\$1,721,690	
Operating Support Fund (2 yrs)				deleted	
Endowment	23			deleted	
Operating Cash Reserve		0%		deleted	
SUBTOTAL FUNDS	1%				\$1,721,690
TOTAL	100%				\$136,814,285

Table 26.3 (4 of 4)

Source: National Coast Guard Museum Association, United States Coast Guard, Payette and White Oak Associates

Notes to Startup Budget

- 1 The Startup Budget collects figures developed by others into one total. Different parties, as noted, are responsible for the numbers, and yet other parties will be responsible for their implementation. The planners strongly advise against borrowing money to complete the

project with the hope that the loans can be repaid by future fund-raising or by excess revenues generated by earned income; museums that have tried this road have routinely suffered.

- 2 **This budget is integrated** and does not reflect a division between the Coast Guard, the Association and potential other parties.
- 3 **Costs are for the net available to spend on a particular expense;** any additional carrying, overhead or margin costs to the Association or the Coast Guard are not included.
- 4 **Construction Costs:** Based on the NCGMA pre-construction cost estimating of the design at the conclusion of Schematic Design (May, 2018), the Association reports it is carrying \$62,811,501 for construction. This figure is all-in, in other words, the bulkhead and the site work are included along with contractor margins. This figure does not include soft costs. The association hired expert cost estimators to provide 2019\$ estimates based on the c 82,000 SF size building at the end of Schematic Design. The building design and costing will evolve during Design Development. The cost estimate total many pages of unit take-offs and costs; the \$\$/GSF number is only a calculation and is based on the 68,325 GSF of the economic model and architectural program in this document, not the 82K GSF of the current design, which is likely to change toward the model during Design Development.
- 5 **Building Associated (Soft Costs)** are carried at 20% of construction.
- 6 **The Overpass:** The State of Connecticut is slated to pay for the bridge and associated costs such as related operating and site costs, with a not-to-exceed \$20,000,000 budget¹. The Association is managing these funds (only some funds have been authorized so far), and Payette is designing the bridge in tandem with the Museum building. As the Association is including the State's \$20M in its fund raising tally, the Capital Budget will include the same amount as an expense. In this case, the budget figure must cover construction, soft costs and project management (operating) expenses.
- 8 **Museum Program Interface Specifications:** a budget to cover the development of the *Room Book* and the ongoing review of the architectural design to make sure it conforms with the needs of the Museum and its exhibits, theaters and other programmatic elements. This specialized individual/firm is responsible for monitoring building functionality and is effectively the liaison between the Visitor Experience Team and the architectural and construction teams.
- 9 **Furniture, Fixtures and Operating Systems for Staff Support:** As digital equipment expands capabilities, this group of office-related capital costs should be considered together, especially as the Coast Guard may have packages of equipment and systems allocated per staff member: Furniture, Fixture, Equipment (FF&E); MIS Network; Computers and Software; Telephone; Other Office systems (e.g., copiers). This budget assumes capital purchases at competitive prices from traditional vendors; the Coast Guard, however, may prefer to use its own purchasing or to consider all this equipment as part of an operating, not capital agreement.
- 10 **The Information Technologies** needed by either the Museum or the Association may include in addition to work stations and phones (there could be others as well):

¹ Operation and ownership of the bridge is not in the Museum's budget, but is expected to be covered by the City as an extension of its paid parking lot.

- Reservation system for school groups and events include catering needs
- Catering may be a separate software package
- Volunteer management system, user friendly
- Collections data base software as an extension of current system
- Facility systems maintenance software, scheduling maintenance software for equipment
- HVAC systems software to manage the building 24/7, including off site
- Everbridge emergency management software or similar
- Security system software
- Microsoft office suite
- Graphics software
- Lighting grid software
- Accounting, purchasing and payroll software
- Donor database software (Association need).
- Public Wi-Fi

The recommendation at this time is to have at least two computer networks. One that is internal to the Museum and can be accessed by staff. The second would have access to the Coast Guard network. That access should be limited and might include military personnel and personnel in accounting, purchasing, payroll and collections. The Director and Deputy Director should also have access.

The Museum's network is to manage its own Web page, group reservations and event booking and oversee general email for Museum staff. Depending on who manages the internal network, the Coast Guard might have remote access to help maintain the network.

It is recommended that Wi-Fi be available to the public at the Museum. It is generally expected. A random check of several other military museums showed that they offered free Wi-Fi, including the National Museum of the Marine Corps, the National Museum of the US Air Force in Ohio and the Museum of Aviation at Robins AFB in Georgia. Free public Wi-Fi at the National Museum of the US Air Force is provided by their Foundation.

11 Additional Audiovisual Systems (Moveable AV Equip): for use by management, function rental and development programs. The Museum Galleries and STEM Learning Center should include core AV and media in their scopes.

12 Security: Terrorism and active shooters are major risks; hence, the building needs a very good security system with control centers, alarm and security monitors, alarmed cases, and many cameras. Bollards are part of the unified security criteria, UFC 10-4 or 4-10. ATFP Anti-terrorism force protection. This is the Museum's core security and should be included in the base building construction budget.

13 Additional Security Systems & Cash Handling: The Coast Guard's core security systems should be part of the base building and included in the construction budget. The Association needs this additional security for its cash activities.

14 Museum Store & Food Service: assumes the Museum and/or the Association capitalizes the Store, even if leased to an operator. Alternatively, the operator could capitalize their own Store.

- 15 **Additional Interior Signs (e.g., donors):** The main graphics in the Museum will be covered by the core building wayfinding and by the exhibits. This budget is for donor recognition, theater marquee, admissions choices, registration and membership signs, etc.
- 16 **Budgets for the Museum's Visitor Experience** average \$513 to \$656/square foot which is within industry norms. This budget is inclusive of all design fees, fabrication, and installation, but not of the Museum staff salaries and related expenses. This figure collects all the footnoted budget amounts into one total (\$20,082,156) and divides by the total SF of the Visitor Experience Zone (39,110 NSF including circulation or 30,635 NSF without).
- 17 **Collections:** Funds are included to handle and conserve artifacts/objects selected for initial display from the Coast Guard's Heritage Asset Collection. Funds are NOT included to renovate the Academy Museum or the Forestville facility or to move and care for the Collection as a whole.
- 18 **Temporary Staging and Storage of Collection Objects** is one of many costs within the exhibit budget to be allocated by the visitor experience designer.
- 19 **The Association's Pre-Opening Operating Costs:** Estimate provided by the Association (Jun. 2018). This budget addresses the Association's staff and expenses needed to plan and launch the Museum during the years prior to public opening, when the operating budgets should take effect. This category addresses the routine needs of a small team assembled to raise money and build the building, such as an informational package, on-going PR campaign, training and community outreach programs, etc. The budget assumes that temporary furnished and serviced office space and support will be rented downtown and/or near the construction site. The Association is liable for the site and Museum building and has to cover its operating costs and insurance up to the time that the Coast Guard agrees to take over those costs and/or risks (the Coast Guard is self-insured).
- 20 **The Coast Guard's Pre-opening Staffing and Overhead Costs**, as calculated in Chapter 23, Table 23.7 and Table 26.4 below are in two parts: The salaries and expenses from 2017 through 2020 (the top half totaling \$3.2 M, to be requested via the Resource Proposal Process); and the bottom half for staff costs for 2021 and through May, 2022 totaling \$3.7 (2017\$).

The first Staff pre-opening costs of \$3,287,137 (2017\$) ARE IN the Start-up Budget and cover from 2017 through 2020 and are part of the non-building amount escalated for inflation. The second half, which is \$3,659,605 in 2017\$, should be escalated by an additional \$324,000 for 2022\$. The second half is NOT IN the Start-up Budget.

Non-staff costs will include, among other items, the leasing of off-site offices and associated utilities and cleaning costs, office supplies, mailing, utilities, Internet, phones, computer maintenance, printing and mailings, etc.

Staff and Associated Pre-opening Costs by Calendar Year (2017\$)

National Coast Guard Museum

Calendar Year	Cumulative # FTEs	Pre-Opening Staffing	Pre-open Non-Staff Costs OH Rate	Amount	Totals
In Capital and Pre-Opening Budget requested via Resource Proposal Process					
2017	1	\$ 180,032	0	\$ -	\$ 180,032
2018	6	\$ 582,625	30%	\$ 174,788	\$ 757,413
2019	6	\$ 870,192	30%	\$ 261,058	\$ 1,131,250
2020	7	\$ 902,550	35%	\$ 315,893	\$ 1,218,443
SUBTOTAL				\$ 751,738	\$ 3,287,137
Additional Funds needed Pre-Opening					
2021	21	\$ 1,472,492	40%	\$ 588,997	\$ 2,061,488
to May 2022	32.40	\$ 1,141,512	40%	\$ 456,605	\$ 1,598,117
SUBTOTAL				\$ 1,045,602	\$ 3,659,606
TOTAL		32.40	\$ 5,149,403	\$ 1,797,339	\$ 6,946,743

Table 26.4

Source: Coast Guard and White Oak Associates, Inc.

21 Planning Fees and Studies: should be covered by the pre-opening costs of the Association (#19) or the Coast Guard (#20) such as ongoing planning and studies at an institutional level, including food service, museum planning counsel, updates to the economic model and other consultant-based work that will support institutional planning, and that is not explicitly covered by the program budget or by the building-related soft costs.

22 Escalation Reserve on Non-Building Costs: This figure includes a modest inflation amount in order to address inflationary issues between cost estimates and final contracting of museum equipment, program costs and project management outside of the building and its related costs and outside of the Association's operating costs, which include escalation.

23 Endowment: No funds are included in the budget to start the endowment; however, the Museum will benefit from an endowment, and every effort should be made to funnel savings from other budgets into an endowment.

Risk Mitigation

The Association should not green-light any process or contract until it has raised all those funds in order to avoid wasteful terminations or debt. This is particularly important with construction; museums that entered into debt to finish construction have usually suffered for years.

The Association and the Coast Guard should report to each other when each has achieved its key funding/contracting milestones, and these reports should in turn trigger the next activities and spending streams.

The Association should run a second campaign after the opening focused primarily on building an endowment.

Risks and Mitigations

National Coast Guard Museum

Chapter 28—A New Chapter in 2017

This chapter summarizes the current risks and possible mitigations at a top-level view. As some risks are addressed, new ones emerge.

The Association is now a full-time professional team with an office in New London. There is much less risk that the permitting will be denied, and greater chances that the fund raising goals can be met. The project has gained support, the downtown has improved, funds have been identified by both the Association and the Coast Guard, planning has proceeded by both parties, and the architects have completed Schematic Design for a 2022 opening of a new 68,325 GSF Museum.

While all this is positive and a net decline in risk from 2008 and 2013, significant risks remain. Fund raising shortfalls, procedural delays and construction challenges are clear risks, and potential division of funding and responsibility issues may also threaten orderly progress. Written agreements, Key Decision Points (KDPs), holds and off-ramps are needed to mitigate such risks.

Potential Risks

The following risks face many other startup museums at this stage of development. They are generic risks and do not imply that any party to this project is a cause of greater risk:

- **Insufficient capital will be raised:** forcing the project to downsize, phase or stop.
- **Sources of funds not aligned with allocations:** Donors and funders' stipulations on how or what their funds are to spent on do not align with what the Museum needs to spend for startup costs.
- **Unsecured debt, or debt dependent on earnings:** Debt incurred to address a fund raising gap has been very difficult for other startup museums. It will takes a while for on-site revenue generating components to become predictably profitable, and their net proceeds should not be used as collateral for loans.
- **Schedule will be delayed or cancelled:** Funding and approval delays are more common than workload delays in other new museum projects.
- **One or more parties do not hold up their end of the bargain.**
- **Building and visitor experience interface issues:** Whenever a division of labor and responsibility is introduced, the risk of interface issues increases. In this case, the interface between the building and the visitor experience will need careful management.
- **Turnover is not 100% possible on Day 1:** This risk is so likely that it should be planned for – the Marine Museum still has not been turned over, ten years after opening. They have operated successfully using leases. These are some of the possible reasons:

- Punch list closures incomplete
- Donor strings going forward incompatible
- Insurance coverage/liability interrupted
- Debt liens
- Operating costs not covered during startup
- Responsibility and partnership transitions
- **The NCGMA will change or close, requiring a new Association:** The people who build the Museum may move on to other affairs, resulting in either new people who do not carry the same personal relationships or in no replacements, resulting in diminished abilities by the Association.
- **The Coast Guard will change command priorities:** Affecting the Museum's funding and support.
- **The Museum will cost more/less to operate:** While best efforts and research into comparables underlie the assumptions in the economic model, new factors and layers of cost are likely to require some modifications to the economic model.
- **Attendance is very different from expectations:** A free attraction in a transportation hub may add non-museum uses, like overflow waiting space and washrooms.
- **The Association does not generate net income to contribute to the Museum's operation:** In the first years after opening, the Association is likely to launch various revenue-generating ventures such as the gift shop, the event center and fee-based programs run by the STEM Learning Center. Once these revenue initiatives mature, they have good potential to contribute to the Museum in some way. The Association is planning their own money-making ventures, but they are not near a business plan with a bottom line contribution to the Museum.
- **Political, social, environmental or economic issues:** Any number of external issues will affect the project, which needs momentum, flexibility and resilience
- **Project failures:** The three main issues that lead to trouble in other large projects are:
 - Unrealistic/unshared expectations (e.g., budgets and scopes)
 - False deadlines
 - Lack of communication (the root cause of failure)

Possible Mitigations

All parties wish for success. The current successes are evidence that risks such as these can be mitigated: Sufficient funding has been found by both parties to do what needs to be done next. The project is up and running organizationally, and the community is largely supportive. The Association and the Coast Guard have collaborated on some key planning initiatives, and established ways of documenting agreement. There is mutual respect and a will to make it work.

Given this history, maintaining standard risk mitigation procedures such as the following will reduce risk:

- Collaboration on key decisions
- Communication

- Openly discuss risks and mitigations
- Written agreements about expectations
- Key Decision Point (KDP) checkpoints and approvals (See Table 25.1)
- Contingency funds and schedules
- Fast-action decision routes
- Clear lines of responsibility – no gaps
- On-call resources, expertise and back-up
- Go slows, holds, and off-ramps
- *Semper Paratus*

The most important mitigation is to not start any expense until all funds have been received or contracted for and all approvals obtained for that expense.

The KDPs are listed in the Implementation Schedule (Table 25.1) is a way for both parties to formalize moving forward after meeting key goals.

One of the project risks is that the Association will generate no net cash to the Museum after opening, particularly during the early years when the Association is still finishing the building and paying off bridge loans. The current Association has said they want to go out of business on opening, leaving to a future non-profit the operation of the revenue centers.

The best way to mitigate this likely risk is to make sure the Coast Guard has enough resources to operate the Museum successfully without any net from the Association. This is the assumption of *Addendum 2017*, which focuses on the Coast Guard budget to cover the *core operating budget* with the potential for the Association to add *margins of excellence*.

Outcomes that are Worth the Costs and Risks

This document as well as the *Strategic Master Plan* has focused on the capital and operating costs and implications of the new Museum, to inform Coast Guard decisions. These considerations, however, should always be seen in the context of what the Museum can accomplish:

- The public face of the Coast Guard
- A front door to involvement
- A platform to communicate globally
- Public partnerships
- Regional relationships
- Public support for the Coast Guard
- Bonding among Coast Guard families
- 292,000 visits annually



Main Changes Since 2013

National Coast Guard Museum

Addendum '17: Attachment A

Category	Change since 2013	Impact on:
Audience	Population has changed	Attendance
Audience	Attendance ranges may have changed at the comparables	Attendance
Audience	City of New London healthier downtown: more development and renovation, vacancies are down, population growth	Attendance
Audience	Number of ferry passengers has increased and is projected to increase	Attendance
Biz Model	Inflation and cost escalation have happened	Cost
Biz Model	Increase the number of fee-based programs for "Connecticut households, affinity groups/clubs, corporate rentals and retreats, academic conferences; camp-ins and evening programs".	Fee-based programs
Biz Model	Shifts the business model to include program fees	Fee-based programs
Biz Model	Program fee and evening film admission charges add the need for an admission counter and its staff, marketing costs, as well as the need for a single, staffed entrance.	Fee-based programs
Biz Model	All costs for exhibit renewal will be covered by the Museum and do not depend on contributions by the Association.	Cost
Biz Model	Salaries are budgeted at Step 10 based on FY17 Coast Guard salaries for hiring. Previous reports used Hartford locality pay scales at Step 5.	Cost
Biz Model	Four military personnel added to the staff list. Civilian seasonal staff added in peak attendance months of June, July and August.	Cost
Capital Budget	The NCGMA how has full-time professional staff and an office	Cost
Capital Budget	The capital cost of the project has increased	Cost
Context	There are more attractions now than in 2008 and 2014	Attendance
Context	Public funding is declining for museums	Business model
Context	Town has cleaned up. Busy on weekends in a good way. Still a drug problem. 90% of fire station calls are for heroin and opiates.	Downtown
Context	More emphasis on STEM education initiatives and funding	Exhibit Design
Context	There are at least 1/2 dozen projects at some state to development downtown. On the Ft. Trumbull site of the 7 parcels open for sale year ago 5 have been contracted. 850 engineers Electric Boat hired. If get fourth vessel, another 1100 jobs.	Jobs
Context	New hires for Electric Boat. Have 15,000 employees in the area. New parking plan for those neighborhoods. There is a sense of resurgence.	Jobs
Context	DOD spending going up -- surge in employment, but older workers retiring	Jobs
Context	A January 2018 article in <i>The Day</i> indicated that Pfizer plans to cut about 100 jobs from its Groton site.	Jobs
Context	Ferry 1.4M passengers, 500,000 vehicles. 2016 Best year. Connects Acela high-speed rail with ferries.	Other attractions

Context	Asking the Feds to fund through the Tiger Grant to expand the Water Street garage. Want 4000 spaces by 2022.	Parking
Context	Parking fee \$8 now go to \$15. Might have a discount for the museum and for military. And that would be for any of the lots. Maybe keep \$8 for the museum goer.	Parking
Context	Redd said city will maintain the bridge.	Parking
Context	A year ago could not have said that they will meet museum parking demand. Now he feels they will be able to handle it.	Parking
Funding	About \$83 m remains to be raised. Total \$91 m private funds needed. Have 4.5 cash in hand. Maybe \$5 m sold out.	Sources
Funding	Visitor experience and interpretive plan now defined: 5 Wings/STEM center/auditorium	Visitor Experience
Institution	One of the Museum's eight institutional objectives is restored by the changes in the program: "Build Public Partnerships" includes objectives that depend on flexible spaces that can be used for other purposes in the winter, such as "use the facility as a focus for programs, public debates and other community events;" and "Serve the New London community as a social and cultural umbrella."	Purpose
Institution	Opening planned for 2022	Schedule
Institution	Permitting has advanced, and NCGMA is confident of obtaining the permit.	Schedule
Institution	The NEPA is close to completion, without substantive resistance at the public hearing	Schedule
Program	Added: Feature Theater	Business model
Program	The new design removes (not allowed by flood code) a covered patio overlooking the water and adjacent to the City park	Business model
Program	Added STEM Center	Business model
Program	Added more attractions and programs	Business model
Program	Larger building -- more GSF	Cost
Program	New building layout: Schematic Design underway	Facility Design
Program	Black box theater missing in New London. Complaint by local artists. 150-seat theater needed here.	Programming
Program	Expand concept to a heritage and interactive discovery center	Purpose
Site	Downtown site may be less dodgy at night	Downtown
Site	Pedestrian overpass now curved and routes pedestrian traffic to a single main entrance	Facility Design
Site	Urban plaza for hosting festivals and events (exists inland of tracks)	Programming
Team	Payette is now the clear architect for both the bridge and the Museum.	Facility Design



Changes Relative to Community Needs and Aspirations

National Coast Guard Museum

Addendum '17: Attachment B

There are more attractions now than in 2008 and 2014	Attendance
Thinks our 2014 visitor numbers are low.	Attendance
\$6.4 million now for CT marketing. Started at \$15 million State will PR Museum.	Attendance
CT tourism coalition	Attendance
No state tourism budget. Financial crisis cut ad budget	Attendance
SE CT Cultural Coalition. Wendy Bury ED. Tourism and culture are two different things.	Attendance
What is happening in the region? Has been slow growth in the area compared to other areas. Demographics has changed	Attendance
Public funding is declining for museums	Business model
New London's government is currently supportive	Community relations
NEPA review. Supplemental. Hope to finish by year end.	Community relations
What is hope for impact of the Museum? Hope renaissance will finally come to New London. One more piece in the tourism. Museum will give people a place to go when ferry people arrive. How to stop this from being a pass through region.	Community relations
Regulators in DEP have not been totally in favor. Gets people to the table to discuss everything. Regulators don't want to establish precedent e.g. For commercial development.	Community relations
Everyone is thrilled at the Museum will be here except the environmentalists.	Community relations
Economic impact. Will be indirect. Store fronts. Not tons of employment.	Community relations
Coordinates activity in SE CT. Almost all new London. Tribes are non-voting members. His org started as a planning commission for several communities. CG academy and sub marine base attend but don't vote. There are 9 councils statewide.	Community relations
Director for 19 years. NPO for the region. 22 members. He is resident of New London since 4 years old. Coached sports at CT college	Community relations

Some inflation has happened since 2013	Cost
LEED certification for public and cultural buildings more common in aspiration, but some are not bothering with certifications.	Cost
First market rates in decades.	Downtown
Store fronts are filling up.	Downtown
Alumni CG that have settled here.	Downtown
Town has cleaned up. Busy on weekends in a good way. Still a drug problem. 90% of fire station calls are for heroin and opiates.	Downtown
Traffic not an issue unless have to stop for train.	Downtown
Even 4 years out big change. Neighbor developer. 4 buildings on bank street. Make big open space but above residents. 70mm Charlottes Cove development. Howard and bank apartment complex. Saber Point Inn. Franklin enterprises signed condos and apartments.	Downtown
If have 1938 type hurricane RR will be under water. CG building may be the safest place to be.	Downtown
EED recognized enterprise district	Downtown
New budget would increase taxes.	Downtown
They are working on a shared services study.	Downtown
7-8 busses are downtown at the pulse point of the bus station.	Downtown
Real intermodal transportation on their website. Looked at Union Station.	Downtown
More emphasis on STEM education initiatives and funding	Exhibit Design
More emphasis on universal design and access	Exhibit Design
Ambient traffic, parking capacity and crowdedness will vary according to ferry and other schedules. The Museum will be affected by timing issues/opportunities set by others, but probably predictable	Facility Design
Subbase possible closing - there are 3 in the US. Groton only one in northeast so hopeful it won't close.	Jobs
There are at least 1/2 dozen projects at some stage of development downtown. On the Ft. Trumbull site of the 7 parcels open for sale year ago 5 have been contracted. 850 engineers Electric Boat hired. If get fourth vessel, another 1100 jobs.	Jobs
25-26000 people in NL will expand. Maybe add 5000 in next 36 months.	Jobs

New hires for Electric Boat. Have 15,000 employees in the area. New parking plan for those neighborhoods. There is a sense of resurgence.	Jobs
DOD spending going up -- surge in employment, but older workers retiring	Jobs
A January 2018 article in The Day indicated that Pfizer plans to cut about 100 jobs from its Groton site.	Jobs
New contracts for building subs (Virginia class and some other) 15000 people being employed. New a new workforce to move in, younger with families. Good salaries	Jobs
Elec Boat is a big good factor since they bought Pfizer campus. EB	Jobs
Concerned whether Dominion will shutter millstone nuclear power plant in Waterford. Provides. 50-55% of energy to CT. A lot of EB employees don't choose to live in New London. Dominion has threatened as soon as this fall might shutter the plant unless CT passes bill to allow them to sell at market rates.	Jobs
Economic sector board and cog report. Www.secter.org or his website. Talks about economic clusters. Marine tourism. Needs to be updated every five years.	Jobs
State of Ct port authority new. Effort to add maritime commerce. State piers in NL have some cargo ships. Hemp wood products.	Jobs
Water taxi-Nautilus, Fort Trumbull, Groton. Runs now.	Other attractions
Ferry 1.4M passengers, 500,000 vehicles. 2016 Best year. Connects Acela high-speed rail with ferries.	Other attractions
Cruise ships stopped coming here.	Other attractions
Guarde Theater interested in digital and surround sound, 1200 seat theater.	Other attractions
Rinowski lighthouse cruise is filled.	Other attractions
Ferry has more car passengers this year. They want to add a new ferry building at existing spot and add a second boat.	Other attractions
Mohegan expo center largest in state to build. Conference center. Over 100k SF. May hurt convention center in Hartford. Have a whole dept. at Mohegan for tourism.	Other attractions
NASCAR in Oakdale. Go carts. Nature s xx village 60 acres. Dinosaur park. Now added high-end mini golf. Growing attendance.	Other attractions
Mohegan doing great. Opened 1996. Diversified portfolio. Foxwoods has debt. Joint Foxwoods and Mohegan together casino east Windsor. To stop people going to MGM in Mass. So build third casino. Foxwoods thrill adventures will have go cart. Have zip line. Rollercoaster.	Other attractions

Ferry added a new ferry. 1.5 just for Long Island. More come this way than to Long Island. Have a dinner cruise for light houses in 3 states. Very successful. Thinks will go to 2.0 million.	Other attractions
Thames river heritage. New executive director. Water taxi is part of it. Does include Ft. Griswold. Thames river innovation places.	Other attractions
Nautilus is expanding or renovating. More interactive.	Other attractions
This is the epicenter of maritime history in US. Water taxi. Synergy among Museums	Other attractions
Mohegan Sun is landing across the river. Want to be an attraction center.	Other attractions
The Guarde Theatre in State St.	Other attractions
Annual event Ct maritime heritage festival. Different than Sail Fest. First weekend Sept. Draws 1,000s. USS Cole was here. Happens annually.	Other attractions
Watertaxi. March to September. 2 70 ft. navy utility boats. New London and Groton. For private use. Hold about 45 people.	Other attractions
Nautilus build pier next year. Have will build it. Will add water taxi.	Other attractions
20 min Ft. Trumbull to no. 20 to Groton. Maybe 30 to sub.	Other attractions
There is talk of expanding the parking garage. Summer days and especially weekends will fill up (though Traffic person Carey Redd says doesn't fill up.). It would be funded thru a federal? Tiger Grant under transportation They are one of ten bidding. City has no money. Want to make sure it owns the tie into the 20MM.	Parking
Parking across for the Holiday Inn owned privately by Cornish. Big landlord in town. Lot was hang out for drug users.	Parking
If over \$100MM project in the city requires parking. But CG won't do that.	Parking
Cornish who owns parking lot has said will allot spots for Museum to park.	Parking
Carrie involved with parking in Hartford. Hired to reassess where we are in parking. City with state money did a parking study. His focus economic development.	Parking
His assessment: Last year did an analysis. Here to help support needs of the Museum. 8 mo. Analysis of downtown. Changing one way Street to 2 way. State is behind them.	Parking
3 major projects in the area. Block away Renaissance industries. 58milmm including rehab theater to live theater. Dinner in the round.	Parking

\$43mil project. Office and condo project may happen. 2021-2022 goal 4,000 spaces for projected demand plus a little surplus. Looking at all public and private. Peak period around 300,000 to 500,000. He has been using for the Museum and 1/4 mm annually after 60 mos.	Parking
Signage on I 95 for the Museum.	Parking
955 spaces. Will expand	Parking
Of 4000 goal	Parking
Water street garage now 1000 want to go to 1400. Plus 250 Mariner's Square. Cornish 450 private. In discussion with Holiday Inn to manage their 200. Does not include on-street. 1800 on-street now. This spring will line stripe them. Already did that in Ft. Trumbull. Resizing the 1800.	Parking
Asking the Feds to fund through the Tiger Grant to expand the Water Street garage. Want 4000 spaces by 2022.	Parking
Parking ferry couple hundred for waiting to get on.	Parking
Parking fee \$8 now go to \$15. Might have a discount for the Museum and for military. And that would be for any of the lots. Maybe keep \$8 for the museum goer.	Parking
Redd said city will maintain the bridge.	Parking
SE Cultural had a big event in June? Not a problem with parking. Multi day event. There is a perception of parking issues but that is not the reality	Parking
A year ago could not have said that they will meet Museum parking demand. Now he feels they will be able to handle it.	Parking
5-10% growth projected year over year. 7:30 11 12:30 ferries covered.	Parking
Contingency plan if don't get the tiger grant are talking to Wall Street about revenue bonds. 15mil over 25 years. Pony up 900k plus as part of it.	Parking
Paradise side of garage want to have an info center. There is a trolley here. He wants a connection for museum parkers to visit the info center. He wants to bring people to the ground floor not straight to the pedestrian bridge at an upper level.	Parking
Maybe not a lot has changed in the area. Parking has been more solved. Was an issue. Parking issue around EB facility. People don't want to pay for parking. People will skateboard in. He has seen a full sign on the water street parking. He is concerned if school kids come in where the street busses go.	Parking
Museums today place much more emphasis on the web and social media	Programming

Funders focus more on programs with quantifiable social impact and less on legacy bricks and mortar	Programming
Large Puerto Rican population.	Programming
Aging population. Plan of development plan on www.ccog.org . Just updated it. Young people leaving, not staying. Also leaving CT. Casinos attract a lot of immigrants, especially Asia Americans and Asians. They are moving to the region. Started 10-15 years ago. They have a lot of people living in the same house. Moving up to work at the casinos not to gamble. Folks moving in English as second language. Schools adapting. 30 different dialects in Norwich. A lot more Latinos in NL now. NL used to have a lot of Puerto Ricans now Dominicans and others.	Programming
Younger donors are looking for measurable impacts on social issues of significance. They respond well to program initiatives targeting social needs, ideally at a global scale and in partnership with other organizations.	Purpose



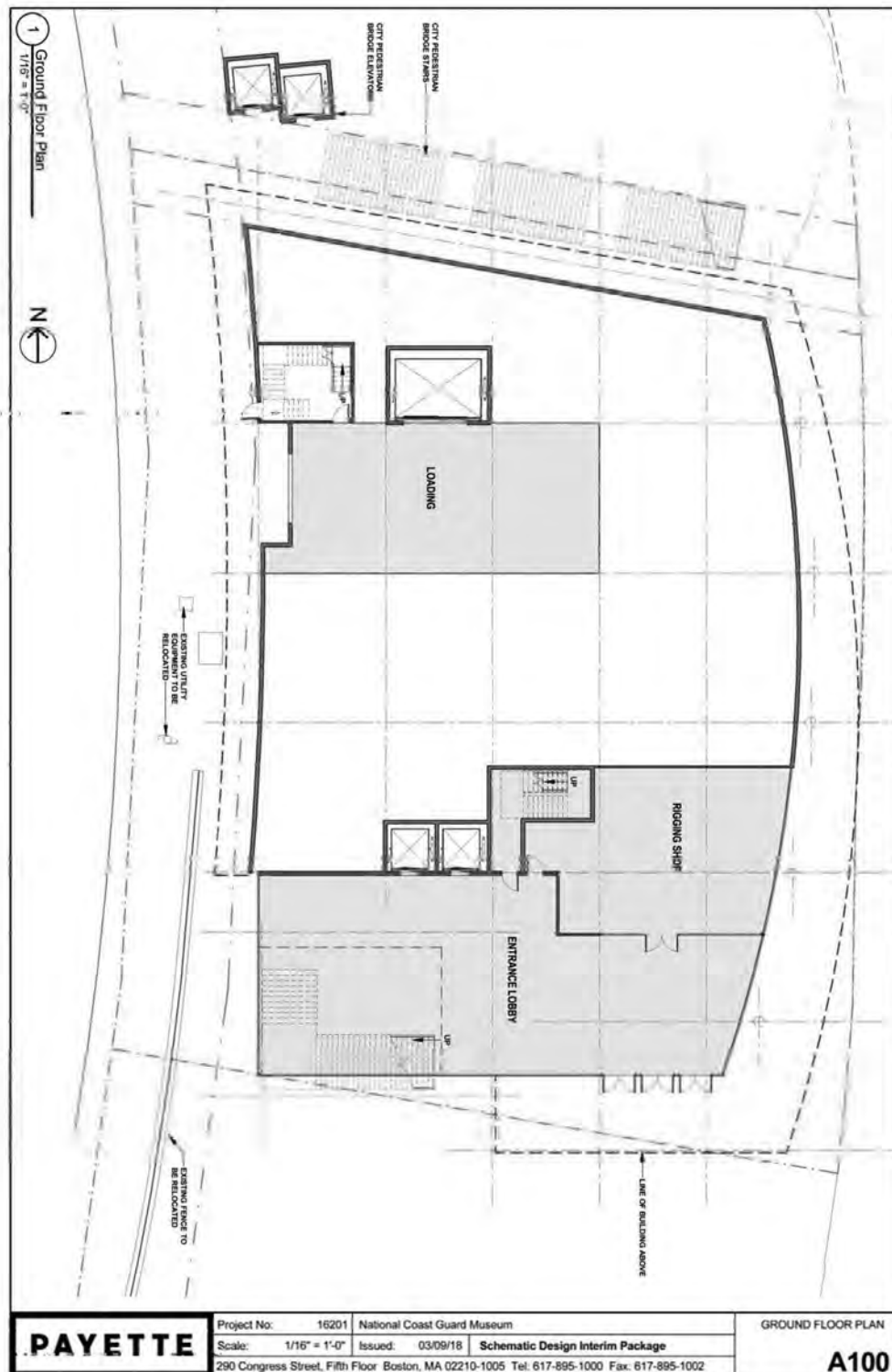
Preliminary Floor Plans (Mar. 2018)

National Coast Guard Museum

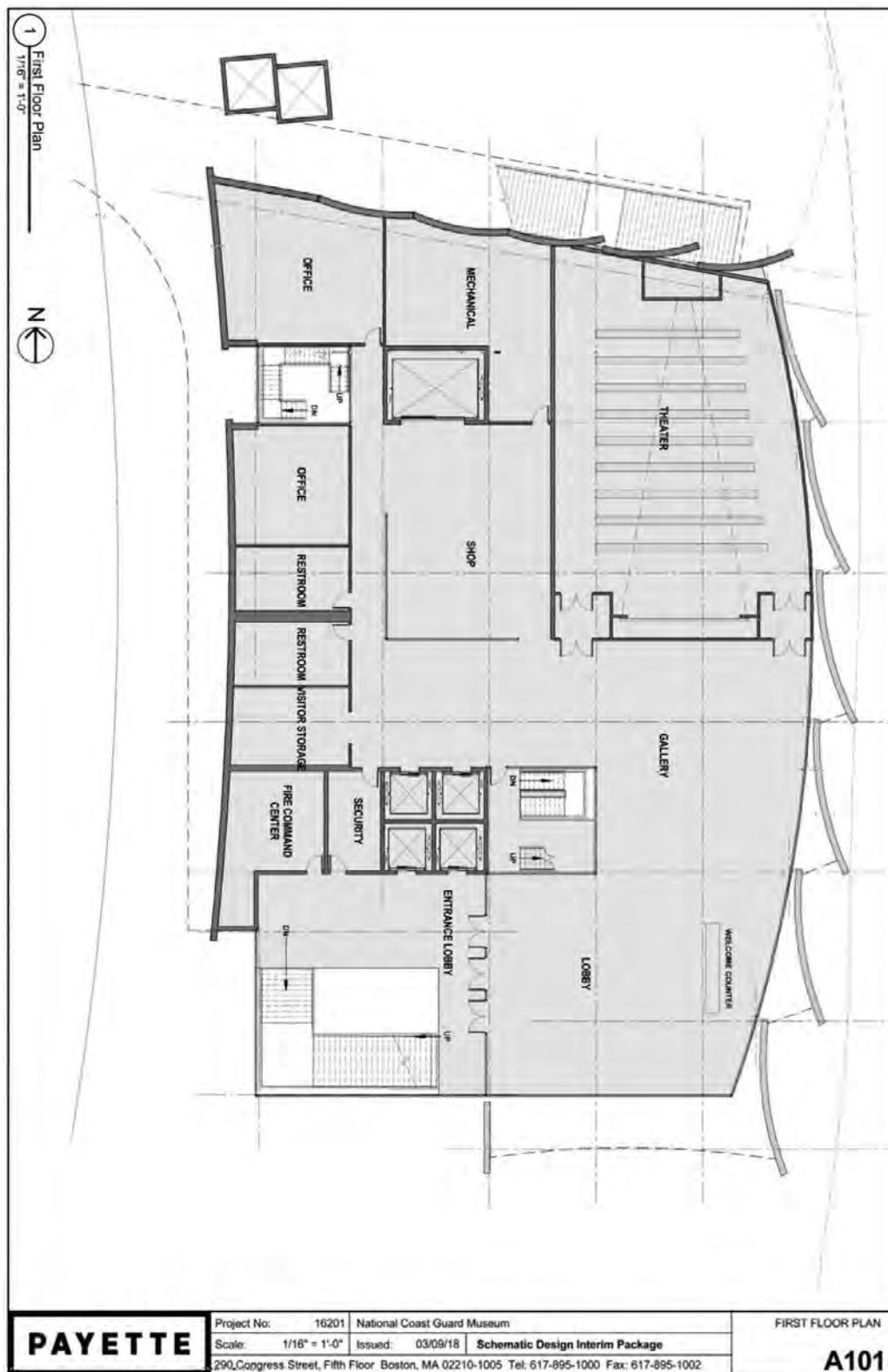
Addendum '17: Attachment C

The illustrations and plans inserted throughout this document are from Payette Architect's Schematic Design for the National Coast Guard Museum, completed in May 2018, just as this document was going to press. These recent designs are for a larger building (c. 80,000 sq. ft.) than their earlier design in December, 2017 (68,325 sq. ft.), which is the basis for the budgets in this *Addendum '17*. The size and layout are likely to keep evolving during design development.

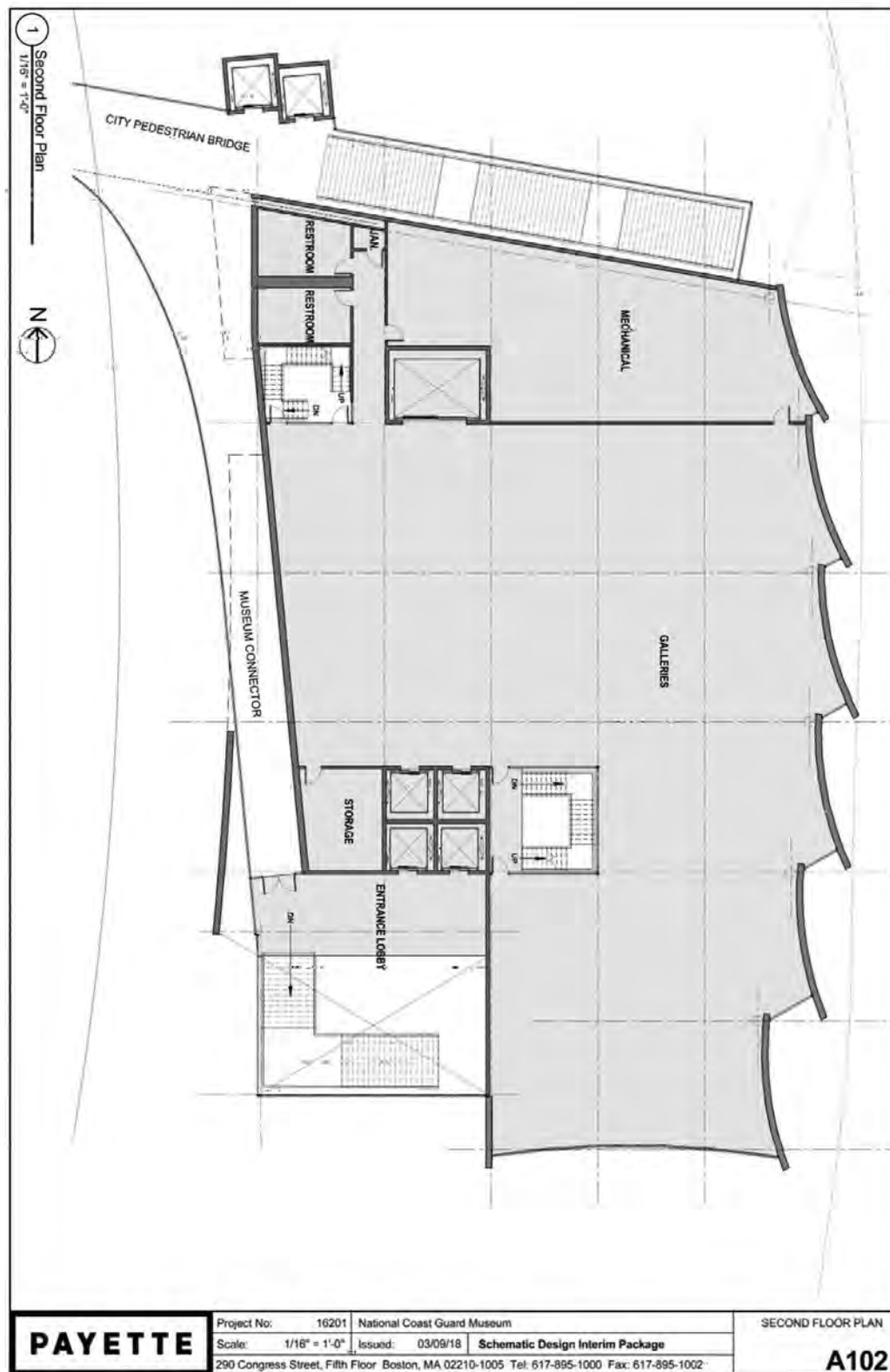




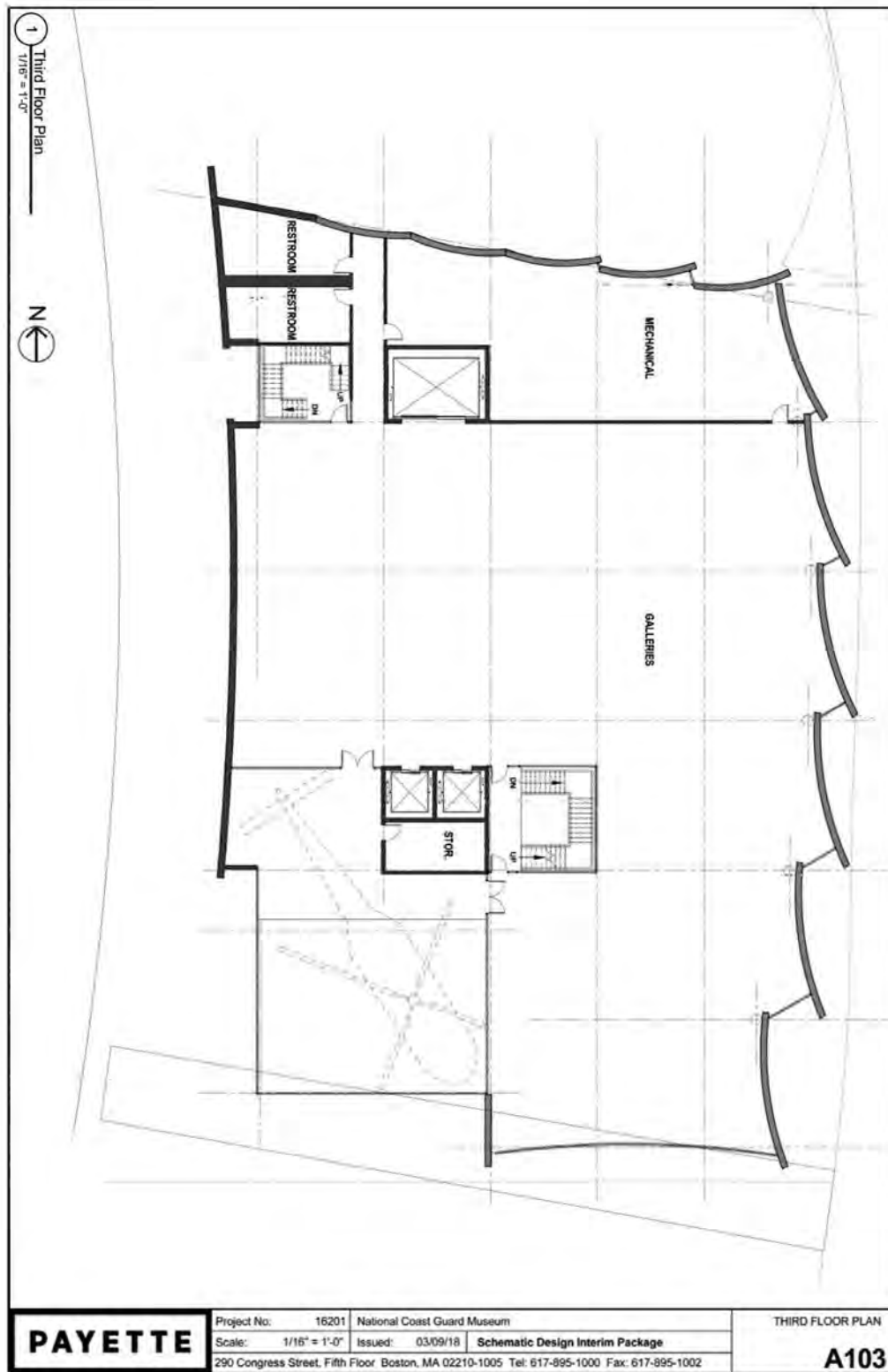
Interim Schematic Design Will Continue to Evolve



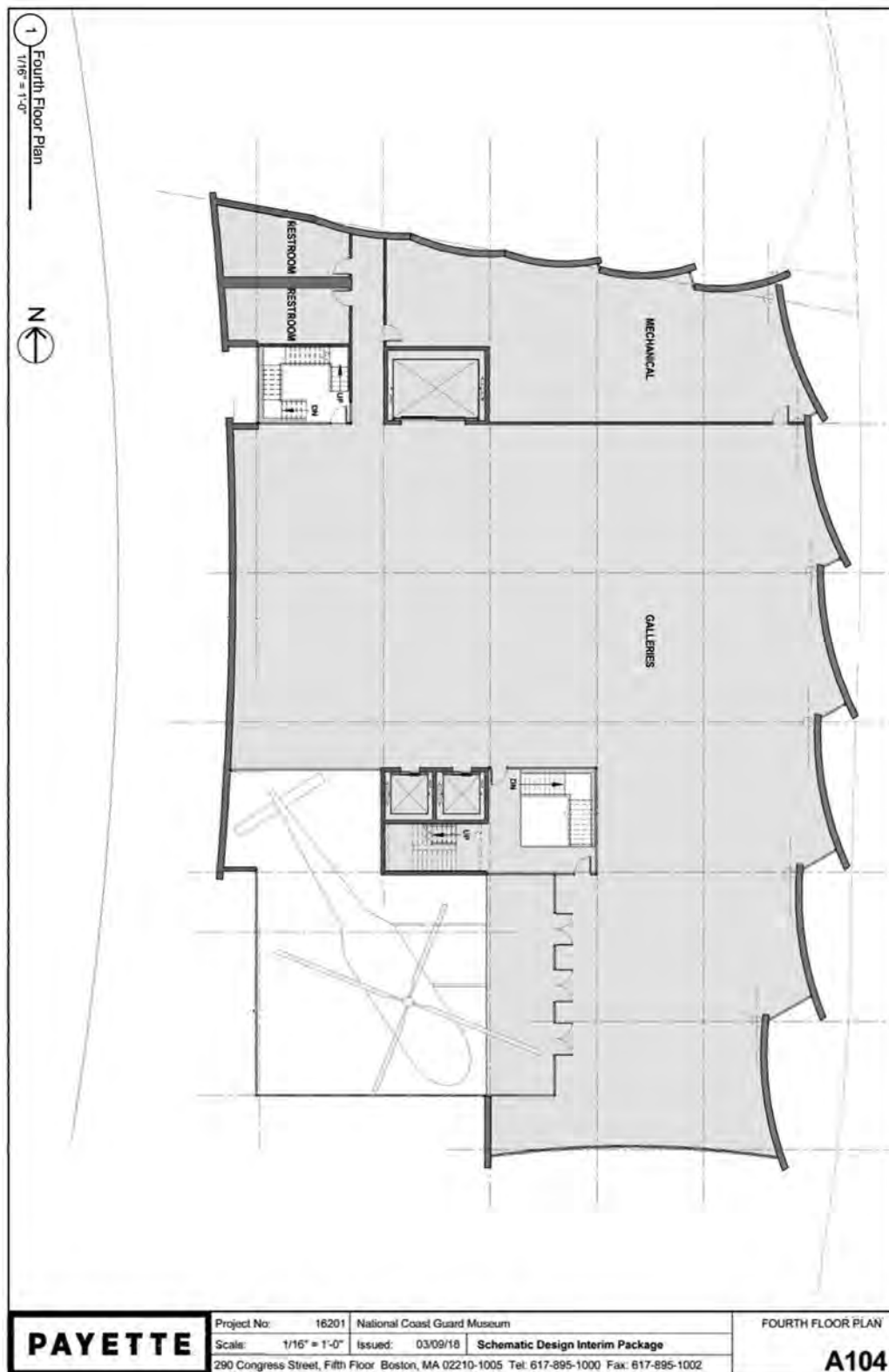
Interim Schematic Design Will Continue to Evolve



Interim Schematic Design Will Continue to Evolve



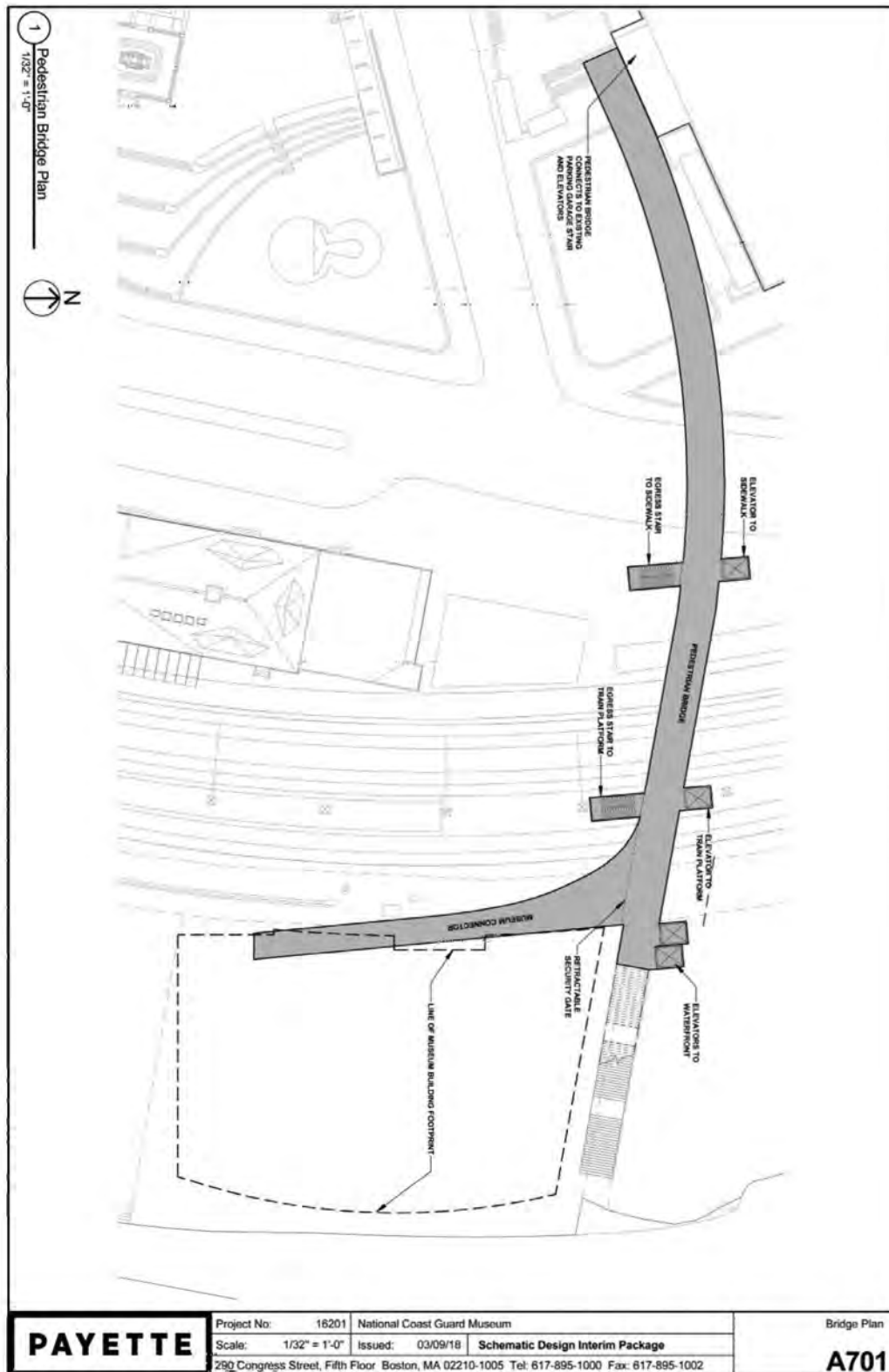
Interim Schematic Design Will Continue to Evolve



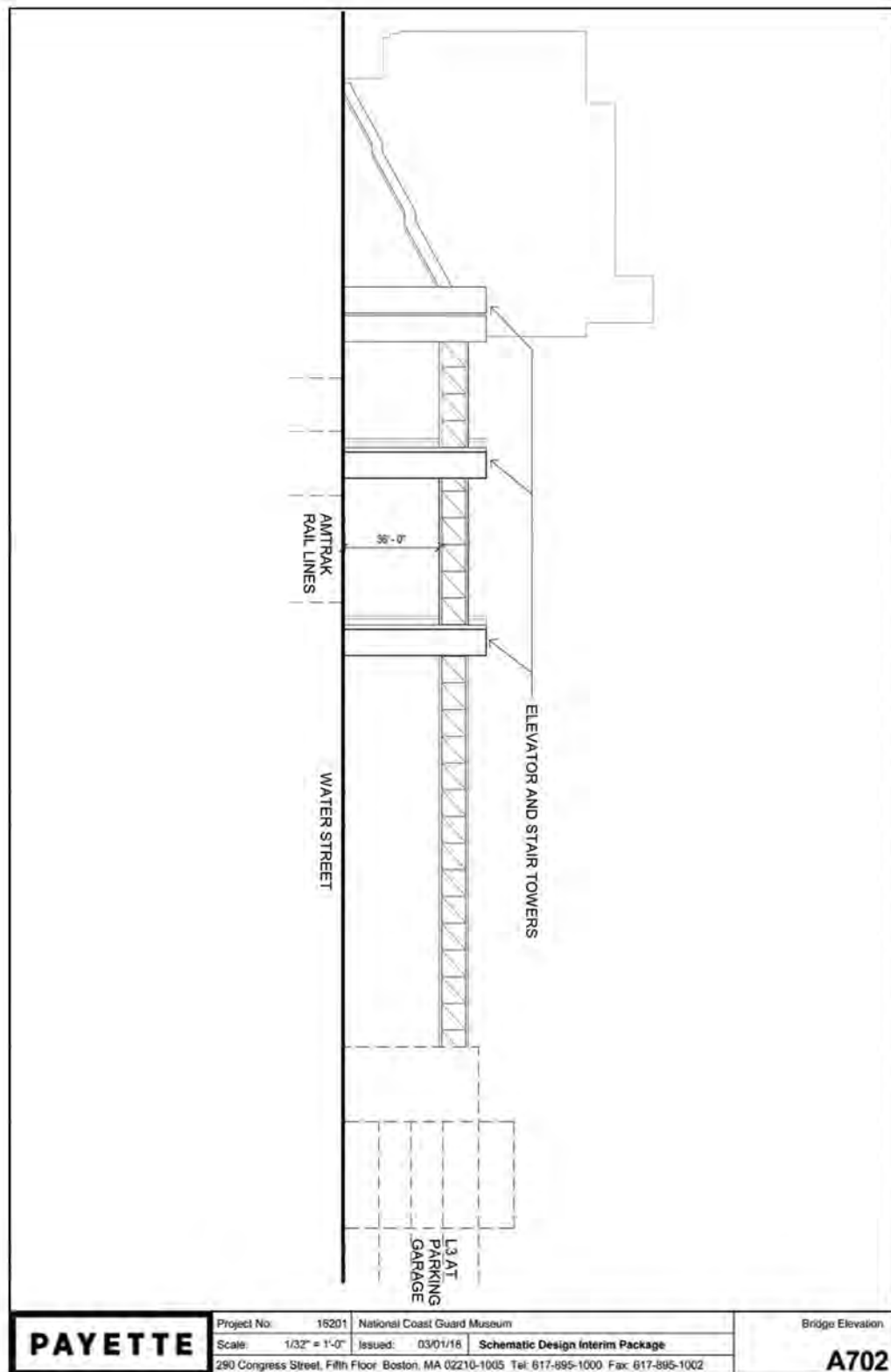
Interim Schematic Design Will Continue to Evolve



Interim Schematic Design Will Continue to Evolve



Interim Schematic Design Will Continue to Evolve



Departmental Operating Budgets

National Coast Guard Museum

Addendum '17: Attachment D

The departmental operating budgets in this attachment present the detail behind the summary budgets shown in Chapter 16, *Five Year Operating Profile*, of this *Addendum 2017*. All department budgets are in 2017 dollars, except where noted.

Museum Summary Operating Budget

2017 Dollars

National Coast Guard Museum

NCGM Budget 2017\$	Future Yr 1	Year 1 2022	Year 2 2023	Year 3 2024	Stable Yr 4 2025	Year 5 2026	Yr 4
<i>On-Site Attendance</i>		321,200	335,800	277,400	292,000	297,840	
EXPENSES							
Salaries and Benefits	52%	\$3,079,535	\$3,079,535	\$3,079,535	\$3,079,535	\$3,079,535	50%
Visitor Services & Programs	5%						7%
Exhibits and Programs	3%	\$163,900	\$263,866	\$313,866	\$328,866	\$323,866	5%
Feature Theater	0%	\$24,600	\$35,600	\$35,600	\$35,600	\$35,600	1%
Visitor Services	2%	\$93,400	\$84,273	\$79,273	\$89,823	\$86,273	1%
Overhead & Support	43%						43%
Admin & Finance	1%	\$47,850	\$50,300	\$50,300	\$50,300	\$50,300	1%
Information Services	2%	\$145,000	\$172,550	\$172,550	\$190,550	\$172,550	3%
Director's Office	1%	\$55,200	\$54,800	\$54,800	\$54,800	\$54,800	1%
Deputy Director's Office	1%	\$34,200	\$32,800	\$32,800	\$32,800	\$32,800	1%
Community Relations	4%	\$218,150	\$174,500	\$174,500	\$189,250	\$189,250	3%
Off-site Storage	2%	\$129,778	\$128,578	\$127,378	\$126,178	\$124,978	2%
Facilities	32%	\$1,917,449	\$1,988,733	\$1,988,733	\$1,998,733	\$1,988,733	32%
TOTAL OPERATING EXPENSES	100%	\$5,909,062	\$6,065,535	\$6,109,335	\$6,176,435	\$6,138,685	100%
Totals <i>Addendum 2014 (2013\$)</i>		\$2,863,963	\$3,047,937	\$3,104,673	\$3,114,673	\$3,289,683	
Totals <i>2008 Master Plan (2008\$)</i>		\$2,352,501	\$2,609,654	\$2,598,561	\$2,721,008	\$2,895,700	
TOTAL EXPENSES Add. '17 (2025\$)		\$6,862,559	\$7,269,323	\$7,549,061	\$7,871,012	\$8,069,965	

Table D.1

Source: White Oak Associates, Inc.

Museum Facility Costs
2017 Dollars
National Coast Guard Museum

NOGM Facility	Year 1 2022	Year 2 2023	Year 3 2024	Stable Yr. Year 4 2025	Year 5 2026
Building Square Feet	68,325	68,325	68,325	68,325	68,325
EXPENSES					
Contract Labor - Security *	\$1,089,861	\$1,089,861	\$1,089,861	\$1,089,861	\$1,089,861
Contract Labor - Custodial and Grounds *	\$244,735	\$244,735	\$244,735	\$244,735	\$244,735
Contract labor seasonal	\$24,524	\$24,524	\$24,524	\$24,524	\$24,524
Cleaning Supplies	\$8,500	\$8,500	\$8,500	\$8,500	\$8,500
Prof. Development/Continuing Education	\$250	\$250	\$250	\$250	\$250
Small Tools	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Maint. & Repair, Supplies - Equipment	\$11,500	\$11,500	\$11,500	\$11,500	\$11,500
Maintenance & Repairs (HVAC mechanical)	\$11,000	\$32,284	\$32,284	\$32,284	\$32,284
Maint. Repair, Supplies - Major systems	\$25,000	\$55,000	\$55,000	\$55,000	\$55,000
Maint. Repair, Supplies - Facility/grounds	\$20,000	\$40,000	\$40,000	\$50,000	\$40,000
All Utilities * (.5% of construction costs)	\$346,000	\$346,000	\$346,000	\$346,000	\$346,000
Contract Services (alarm, safety, Windows covered below)	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
Pest Control	\$1,080	\$1,080	\$1,080	\$1,080	\$1,080
Snow Removal	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Trash Removal	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
Telephone: Maintenance & Operating *	\$28,000	\$28,000	\$28,000	\$28,000	\$28,000
Window Washing (4xs per year)	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
TOTAL EXPENSES	\$1,917,449	\$1,988,733	\$1,988,733	\$1,998,733	\$1,988,733
* Institution Wide Budget					
Totals Addendum 2014	\$364,630	\$425,020	\$425,020	\$475,020	\$690,020
Totals 2008 Master Plan	\$279,870	\$395,748	\$416,655	\$489,102	\$713,794
The 2008 Plan and Addendum 2014 included capital improvement costs in year five, which appear outside of the current facility budget. Also, prior year costs did not include security/custodial as they were on staff, not contracted out.					

Table D.2

Source: White Oak Associates, Inc.

* Denotes institution-wide budget

Note that per the architect, no maintenance costs are anticipated for the bulkhead. Bulkheads can require no maintenance for up to 20 years.

In the 2008 Master Plan, and Addendum 2014 capital renewal costs were included in year five. Those costs are now calculated separately and outside of the operating budget.

Museum Administration, Finance and Human Resources
2017 Dollars
National Coast Guard Museum

NCGM	Stable Yr				
Administration, Finance & Human Resources	Year 1	Year 2	Year 3	Year 4	Year 5
	2022	2023	2024	2025	2026
EXPENSES					
Legal & Professional Fees	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Bank Fees	\$1,800	\$1,800	\$1,800	\$1,800	\$1,800
Delivery and Freight	\$600	\$350	\$350	\$350	\$350
Accounting Related	\$6,000	\$5,500	\$5,500	\$5,500	\$5,500
Equipment Repairs & Maint.	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500
General Supplies & Expenses	\$3,000	\$3,900	\$3,900	\$3,900	\$3,900
Printing and Postage	\$6,000	\$4,500	\$4,500	\$4,500	\$4,500
Printing, Publications, Photo	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Professional Dues	\$950	\$950	\$950	\$950	\$950
Software/Subscriptions/Books	\$0	\$4,000	\$4,000	\$4,000	\$4,000
Staff Recognition & Annual awards	\$1,200	\$1,500	\$1,500	\$1,500	\$1,500
Employee Background Checks	\$500	\$500	\$500	\$500	\$500
Staff Recruiting / Advertising	\$2,500	\$1,100	\$1,100	\$1,100	\$1,100
Travel/Meetings	\$600	\$1,500	\$1,500	\$1,500	\$1,500
TOTAL EXPENSES	\$47,850	\$50,300	\$50,300	\$50,300	\$50,300
Totals Addendum 2014	\$51,000	\$50,360	\$50,360	\$50,360	\$50,360
Totals 2008 Master Plan	\$50,700	\$45,750	\$45,750	\$45,750	\$45,750

Table D.3

Source: White Oak Associates, Inc.

Museum Off-Site Space
2017 Dollars
National Coast Guard Museum

NCGM		Stable Yr				
Off-Site Offices		Year 1	Year 2	Year 3	Year 4	Year 5
		2022	2023	2024	2025	2026
<i>Office Square Footage</i>		4,000	4,000	4,000	4,000	4,000
EXPENSES						
Cleaning Supplies (\$50/mo)	\$50	\$600	\$600	\$600	\$600	\$600
Contracted Custodial (\$200/mo.)	\$200	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400
Delivery and Freight		\$250	\$250	\$250	\$250	\$250
Equipment Repairs & Maint.		\$300	\$300	\$300	\$300	\$300
General Supplies & Expenses		\$250	\$250	\$250	\$250	\$250
Internet (to link to main facility)	\$250	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Pest Control		\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Telephones (600/yr/staff)		in facility department budget				
Office Lease (\$20/SF)	\$20	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
Utilities	\$3.24	\$12,978	\$12,978	\$12,978	\$12,978	\$12,978
Water included above in utilities				\$0	\$0	\$0
Build out of office space (walls, electric, HVAC, etc.)		\$26,000	\$24,800	\$23,600	\$22,400	\$21,200
Landlord pass through property Taxes	\$250	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
TOTAL EXPENSES		\$129,778	\$128,578	\$127,378	\$126,178	\$124,978
Totals <i>Addendum 2014 (2500 SF)</i>		\$62,000	\$62,000	\$62,000	\$62,000	\$62,000
Totals <i>2008 Master Plan</i>		\$0	\$0	\$0	\$0	\$0

Table D.4

Source: White Oak Associates, Inc.

Some amount of build out of the space is budgeted at \$25 per square foot..

Museum Visitor Services
2017 Dollars
National Coast Guard Museum

NCGM Visitor Services	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026
EXPENSES					
Contract Labor (incl. Floor Staff)	\$69,100	\$64,100	\$59,100	\$64,100	\$64,100
General Signs	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Postage	\$1,300	\$723	\$723	\$723	\$723
Printing & Duplicating	\$10,500	\$9,450	\$9,450	\$15,000	\$9,450
Supplies	\$1,500	\$2,000	\$2,000	\$2,000	\$2,000
Training	\$2,000	\$1,500	\$1,500	\$1,500	\$1,500
Travel/Meetings (In Exec. Office)					
Uniforms (assumes 50 volunteers)	\$2,500	\$500	\$500	\$500	\$2,500
Volunteer Background Checks	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
Volunteer Recognition / Awards	\$4,000	\$3,500	\$3,500	\$3,500	\$3,500
TOTAL EXPENSES	\$93,400	\$84,273	\$79,273	\$89,823	\$86,273
Totals <i>Addendum 2014</i>	\$64,050	\$54,544	\$41,544	\$54,544	\$54,544
Totals <i>2008 Master Plan</i>	\$68,450	\$37,300	\$37,300	\$37,300	\$37,300

Table D.5

Source: White Oak Associates, Inc.

Costs for contract labor were increased in Addendum 2017 to add gallery interpreters/greeters during the summer, when attendance will be higher.

Museum Exhibits, Heritage Asset Collections and Programs
2017 Dollars
National Coast Guard Museum

NCGM					
Exhibits and Programs	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026
EXPENSES					
Salaries Casual/Temps (Interns)	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
Exhibitions (including changing)	\$25,000	\$50,000	\$100,000	\$100,000	\$100,000
Programming	\$25,000	\$50,000	\$50,000	\$60,000	\$60,000
Collections Presentation	\$6,000	\$15,000	\$15,000	\$15,000	\$15,000
Shipping (USCG Artifacts and Art)	\$5,000	\$29,000	\$29,000	\$29,000	\$29,000
Printing / Graphic supplies	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
Exhibit Gallery and STEM Ctr - Program Supplies	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
Events	\$12,000	\$12,000	\$12,000	\$17,000	\$12,000
Exhibit, AV, Lighting Repair & Maint Supplies	\$20,000	\$36,866	\$36,866	\$36,866	\$36,866
Maintenance & Repair Equipment	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
Non Capital Equipment	\$1,000	\$1,100	\$1,100	\$1,100	\$1,100
General Supplies - Exhibits	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
Travel/Meetings/Professional Development	\$2,900	\$2,900	\$2,900	\$2,900	\$2,900
Research and Evaluation	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
TOTAL EXPENSES	\$163,900	\$263,866	\$313,866	\$328,866	\$323,866
Totals <i>Addendum 2014</i>	\$165,200	\$291,504	\$287,940	\$327,940	\$287,940
Totals <i>2008 Master Plan</i>	\$93,125	\$253,750	\$238,750	\$288,750	\$238,750

Table D.6

Source: White Oak Associates, Inc.

Museum Feature Theater
2017 Dollars
National Coast Guard Museum

NCGM	Year 1	Year 2	Year 3	Year 4	Year 5
Feature Theater (signature film mode only)	2022	2023	2024	2025	2026
EXPENSES					
Maintenance Contract - Projector and AV		\$10,000	\$10,000	\$10,000	\$10,000
Projector Lamps	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Office Supplies & Services	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Postage & Express Mail	\$250	\$250	\$250	\$250	\$250
Programming	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Replacement parts	\$1,000	\$2,000	\$2,000	\$2,000	\$2,000
Subscriptions	\$350	\$350	\$350	\$350	\$350
Conferences and Travel	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
TOTAL EXPENSES	\$24,600	\$35,600	\$35,600	\$35,600	\$35,600
Totals <i>Addendum 2014</i>	\$0	\$0	\$0	\$0	\$0
Totals <i>2008 Master Plan</i>	in Association Budget only				

Table D.7

Source: White Oak Associates, Inc.

The Feature Theater has a small budget as during the day only one film, the introductory film will be showing. Changing films and other programs that might have a fee will be run by the Association.

Museum Information Systems and Technology Services
2017 Dollars
National Coast Guard Museum

NCGM	Year 1	Year 2	Year 3	Stable Yr	Year 5
Information Systems and Technology Services	2022	2023	2024	Year 4 2025	Year 5 2026
EXPENSES					
Contract Labor / Consultants / Professional Services	\$68,000	\$40,000	\$40,000	\$40,000	\$40,000
Internet connection (Museum-wide)	\$24,000	\$26,000	\$26,000	\$26,000	\$26,000
Web Site - Maintenance	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000
Computer Supplies	\$6,000	\$9,000	\$9,000	\$9,000	\$9,000
Software and Web Resources (in capital budget yr 1)	\$0	\$22,000	\$22,000	\$40,000	\$22,000
Computer System Mainten. Contracts (software & hardware)	\$28,000	\$45,000	\$45,000	\$45,000	\$45,000
Network Infrastructure (in capital budget yr. 1)	\$0	\$12,000	\$12,000	\$12,000	\$12,000
Computer Replacement (4 yr cycle)	in improvement budget				
Professional Dev./Meetings/Mileage	\$1,000	\$550	\$550	\$550	\$550
TOTAL EXPENSES	\$145,000	\$172,550	\$172,550	\$190,550	\$172,550
Totals <i>Addendum 2014</i>	\$78,100	\$143,550	\$143,550	\$143,550	\$143,550
Totals <i>2008 Master Plan</i>	\$70,750	\$133,000	\$133,000	\$133,000	\$133,000

Table D.8

Source: White Oak Associates, Inc.

Museum Community Liaison and Public Relations
2017 Dollars
National Coast Guard Museum

NCGM Community Liaison and Public Relations	Year 1 2022	Year 2 2023	Year 3 2024	Stable Yr Year 4 2025	Year 5 2026
<i>On-site Attendance</i>	321,200	335,800	277,400	292,000	297,840
EXPENSES					
Professional Development	\$350	\$350	\$350	\$350	\$350
PR & Production: Museum-wide	\$17,500	\$26,250	\$26,250	\$41,000	\$41,000
Clipping Service	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500
Dues & Subscriptions	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Military Personnel Costs	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Photography	\$4,800	\$2,400	\$2,400	\$2,400	\$2,400
Official CG Outreach	\$60,000	\$20,000	\$20,000	\$20,000	\$20,000
Annual Report	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
Postage	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500
Graphics, Signage & Printing	\$70,000	\$60,000	\$60,000	\$60,000	\$60,000
Label /Graphic Prod	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
Supplies	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Banners/Collateral	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Travel/Meetings (In Director's Office)					
TOTAL EXPENSES	\$218,150	\$174,500	\$174,500	\$189,250	\$189,250
Totals <i>Addendum 2014</i>	\$151,740	\$204,950	\$163,650	\$163,650	\$163,650
Totals <i>2008 Master Plan</i>	\$140,500	\$118,500	\$118,500	\$118,500	\$118,500

Table D.9

Source: White Oak Associates, Inc.

Office of the Museum Director
2017 Dollars
National Coast Guard Museum

NCGM	Stable Yr.				
Office of the Museum Director	Year 1	Year 2	Year 3	Year 4	Year 5
	2022	2023	2024	2025	2026
EXPENSES					
Advisory Board Expense	\$6,000	\$5,000	\$5,000	\$5,000	\$5,000
Computer Software	\$2,000	\$5,000	\$5,000	\$5,000	\$5,000
Equipment purchase	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
General Expenses	\$1,200	\$950	\$950	\$950	\$950
Printing and Postage	\$600	\$500	\$500	\$500	\$500
Printing, Publications, Photography	\$2,700	\$2,500	\$2,500	\$2,500	\$2,500
Prof. Development (for all)	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500
Professional Dues (museum associations, etc.)	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Professional Fees	\$7,500	\$6,000	\$6,000	\$6,000	\$6,000
Service Repairs	\$1,000	\$650	\$650	\$650	\$650
Software/Subscriptions/Books	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Supplies	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Travel/Meetings	\$17,500	\$17,500	\$17,500	\$17,500	\$17,500
TOTAL EXPENSES	\$55,200	\$54,800	\$54,800	\$54,800	\$54,800
Totals <i>Addendum 2014</i>	\$175,850	\$159,136	\$139,436	\$139,436	\$139,436
Totals <i>2008 Master Plan</i>	\$173,600	\$150,100	\$133,100	\$133,100	\$133,100
<i>(2008 and 2014 had a large discretionary fund)</i>					

Table D.10

Source: White Oak Associates, Inc.

Office of the Museum Deputy Director
2017 Dollars
National Coast Guard Museum

NCGM	Stable Yr				
Office of the Deputy Director	Year 1	Year 2	Year 3	Year 4	Year 5
	2022	2023	2024	2025	2026
EXPENSES					
Computer Software	\$2,000	\$5,000	\$5,000	\$5,000	\$5,000
Equipment purchase	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
General Expenses	\$1,200	\$950	\$950	\$950	\$950
Printing and Postage	\$600	\$500	\$500	\$500	\$500
Printing, Publications, Photography	\$2,700	\$2,500	\$2,500	\$2,500	\$2,500
Professional Fees	\$7,500	\$6,000	\$6,000	\$6,000	\$6,000
Service Repairs	\$1,000	\$650	\$650	\$650	\$650
Software/Subscriptions/Books	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Supplies	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Travel/Meetings	\$12,000	\$10,000	\$10,000	\$10,000	\$10,000
TOTAL EXPENSES	\$34,200	\$32,800	\$32,800	\$32,800	\$32,800
Totals <i>Addendum 2014</i>	\$0	\$0	\$0	\$0	\$0
Totals <i>2008 Master Plan</i>	\$0	\$0	\$0	\$0	\$0

Table D.11

Source: White Oak Associates, Inc.

Market Assessment Background Data

National Coast Guard Museum

Addendum '17: Attachment E

*Reflects changes and updates since the 2008 Strategic Master Plan
and Addendum 2014*

The information and tables in this Attachment were used to inform the update and analysis of the market environment and estimated future market segment populations from which the Museum will draw visitors.

Population

Population in CT Counties 2010 - 2016

National Coast Guard Museum

County	2010	2011	2012	2013	2014	2015	2016	Change 2010-2016
Fairfield	916,829	928,890	934,931	940,621	943,686	944,674	944,177	27,348
Hartford	894,014	897,057	897,420	897,737	896,258	894,692	892,389	-1,625
Litchfield	189,927	188,968	187,487	186,760	185,110	183,776	182,571	-7,356
Middlesex	165,676	166,225	165,512	165,219	164,555	163,577	163,329	-2,347
New Haven	862,477	864,009	864,177	862,712	861,534	859,073	856,875	-5,602
New London	274,055	273,226	274,267	273,405	272,053	270,639	269,801	-4,254
Tolland	152,691	153,093	152,006	151,881	151,758	151,684	151,118	-1,573
Windham	118,428	118,425	117,995	117,668	116,919	116,615	116,192	-2,236
Totals	3,574,097	3,589,893	3,593,795	3,596,003	3,591,873	3,584,730	3,576,452	2,355

Table E.1

Source: US Census; American Fact Finder

Population Projections by County
National Coast Guard Museum

	2015	2020	2025
Fairfield County	932,377	944,692	954,479
Hartford County	910,924	925,492	936,810
Litchfield County	192,188	193,116	193,112
Middlesex County	168,833	170,518	170,976
New Haven County	881,374	898,514	912,056
New London County	279,755	283,665	285,773
Tolland County	155,924	158,606	160,759
Windham County	122,718	126,432	129,527
Statewide Total Update of Sept. 2017	3,593,301	3,604,603	3,618,763
Statewide Total Projected Nov. 2012	3,644,093	3,701,035	3,743,492

Table E.2

Source: CT Data Center at University of CT. November 1, 2012. (https://ctsdc.uconn.edu/2015_2025_projections/)
And Update of September 19, 2017 (<https://ctsdc.uconn.edu/2015-to-2040-population-projections-state-level/>)

City of New London
National Coast Guard Museum

Year	Population
2007	25,953
2008	26,116
2009	26,184
2010	27,620
2011	27,629
2012	27,561
2013	27,361
2014	27,215
2015	27,015
2016	26,984
2017	27,650

Table E.3

Source: American FactFinder, US Census.

Tourist Market
Statewide Tourism Information from Visitor Intercept Studies, Witan Intelligence

CT has supported in-person Visitor Intercept Studies for 16 years. These reports are conducted by Witan *Intelligence*. The reports include data about visitor profiles, both in-state visitors and out-of-state. It is estimated that CT residents, based on the 2016 intercepts, represent two-thirds of the State's tourism market. This includes both daytrippers and overnight visitors. Some of the highlights of the 2016 year-end report were as follows:

All Visitors:

- 69% of parties included a CT resident
- 36% of parties included children under the age of 18
- 62% were adults only and visited without children
- 35% of parties included someone 55 or older
- Median annual household income was \$83,200
- 23% earn less than \$50,000 and 18% earn more than \$150,000

Out-of-State Visitors:

- Out-of-state visitors comprised 36% of visitors
- 92% of out-of-state visitors had been to CT destinations before
- 14% came from NY/NJ
- Out-of-state visitors averaged 3.7 trips/year to CT, 49% of all their trips
- Purpose of trip: 39% Entertainment and 30% Visiting Friends and Family/Relatives (VFRs)
- 65% of parties with out-of-state visitors stayed an average of 3.2 nights
- 42% spent some nights in commercial lodging
- 42% stayed with family or friends
- Of \$1,158 average spending per trip, the three largest categories of spending were lodging, wagers (gambling) and shopping.

New London County

According to the report, 65% of tourism spending in the Mystic Country region is from recreation, followed by food and beverage. Looking at tourism spending by county, New London County generated 25.3% of tourism spending, second only to Fairfield County at 27.2%. Recreation spending in New London accounted for 68% of spending.

Total tourism and recreational spending, a component of total sales, in the county of New London declined between 2011 and 2015, though total sales showed a slight increase in 2015 over 2014. Recreational spending saw less of a decline. Recreational spending as a percentage of total tourism spending declined between 2011 and 2015.

City of New London**Violent Crime Index per 100,000 Persons**
National Coast Guard Museum

Year	Overall
2008	382
2009	453
2010	457
2011	453
2012	462
2013	451
2014	339
2015	308
2016	321

Table E.4Source: www.city-data.com**Violent Crime Index per 100,000 Persons**
National Coast Guard Museum

Town	2011	2015	2016
New London	412	308	321
Norwich	229	174	172
Waterford	164	177	175
Stonington	107	not available	
Groton	89	134	171
CT	276	221	228
US	387	384	397

Table E.5Source: www.city-data.com and <http://www.disastercenter.com/crime/uscrime.htm>
and <http://www.dpsdata.ct.gov/dps/ucr/data/2016/Crime%20in%20Connecticut%202016.pdf>**Downtown New London Transportation Study**

As part of the scope of *Addendum 2014*, the Coast Guard requested a review of literature in regard to area transportation and parking that could affect Museum visitation. A transportation study was completed by Milone & MacBroom, who were hired by the City of New London. Their report, *New London Downtown Transportation & Parking Study*, is dated February 2017. If the recommendations in the report are implemented future issues of not enough parking once the Museum opens will be alleviated. There may still be some issues on peak summer weekends when visitors are using the ferries and visiting the Museum, but with the planned addition of

new parking spaces the issue may be more of where to park (closer or farther away) rather than if there are spaces to park in.

The purpose of the study was to develop recommendations and propose multimodal improvements that would improve safety and support the economic development of the City. The study included an analysis of parking facilities, current traffic patterns and future needs based on business and building inventory assuming higher levels of occupancy. Background research also included a review of currently planned improvements and development in and around the downtown.

A survey conducted as part of the study indicated that 89% of commercial business, tourist destinations and residential communities anticipated an increase in visitors, patrons or residents over the next five years.

Parking

Looking at current summer-time parking utilization the study reported that three-quarters of off-street parking spaces are utilized during Saturday afternoons.

Several recommendations were made to provide for adequate parking, including adding more spaces, by expanding the Water Street Garage or constructing a new facility. Other recommendations included better access to and use of private parking.

Parking demand will increase as downtown vacant property is developed. Much of the study in regard to future needs is based on potential development of the vacant properties, not actual planned development. The study identified 117,500 SF of vacant building space in downtown New London that could be re-occupied with retail and restaurant uses, 68,000 SF feet that might become offices and an additional 10,000 SF space as a theater. Some new projects were close to being confirmed in November 2017.

The report states that over the next several years approximately 170 passenger parking spaces will be lost at the Cross Sound/Block Island Ferry. Seventy spots will be lost once the Museum and the new ferry terminal are built. Another 100 or so on-site parking spaces would also be lost due to the need for more vehicle staging with the expected increase in ridership. The loss of those spaces will shift people to the public parking supply downtown.

Projected future demand was developed based on new developments, including the Museum, and expansions in ridership, as well as re-occupancy of currently vacant downtown building space. Anticipated parking needs used the Museum's parking demand from *Addendum 2014*, which identified the parking need on a peak summer day as 293 spaces plus an additional 32 for staff and volunteers. Current peak summer day estimates for the Museum are 309 parking spaces plus 30 spaces for staff, volunteers and contracted security and custodial.

At the time of the Milone and MacBroom study there were 1696 spaces in three garages and one lot in downtown New London. A survey during peak summer times showed that from Friday evening through Sunday morning utilization rates ranged from 47% to 74%. Based on projected increases in needs the utilization rates, on peak summer days, ranged from 99% to 133%, indicating there are not enough parking spaces. The shortage is about 800-850 parking spaces during peak times. The study ultimately recommended that a new parking garage be built and also recommended some short-term measures that could be implemented until the new garage is built, including more use of the currently underutilized Governor Winthrop Garage and

increased public access to privately held parking. The study did not appear to include on-street parking, of about 1800 spaces.

The study recommends that new public parking of around 350 new spaces (the city is planning on adding 400 spaces) be added, that the public get access to private parking (around 250 spaces) and recommends implementing strategies to shift automobile demand to other modes of transportation, reducing need by about another 250 vehicles. Those initiatives would avoid a future parking shortage.

As indicated above and as stated in a March 22, 2018 article in *The Day*, the Parking Authority was about to start maintenance and improvement of the Water Street garage including modernization of the entrances and exits and the installation of updated control systems that will accept credit cards. The city is continuing to pursue funding for the \$13 million to \$15 million needed to expand the number of parking spaces by about 400.¹

Vehicular Traffic

An analysis of existing and future traffic demands was a critical aspect of the transportation study. Existing traffic volume downtown and anticipated increased future traffic needs were based on increases in ferry and public transportation ridership, redevelopment and new development and from the Museum. Many recommendations were made to address the increase in traffic.

Ferry Service

“The report stated that Cross Sound Ferry estimates that their ridership will grow with an additional 3,000 passenger trips made per day (during the summer) over the next five years. Approximately two-thirds of the passengers are expected to be Long Island Auto Ferry riders. Block Island Ferry ridership, which notably affects parking in downtown New London, is also projected to grow.”² Cross Sound Ferry is planning to build a new high-speed ferry terminal (next to the Museum) and increase their number of daily departures/arrivals. Projected growth for the Cross Sound Ferry is similar to the growth they have seen recently, 4%-5% per year.

Approximately half of the riders of the Cross Sound Ferry bring their vehicle on the vessel. The remaining riders are walk-ons. Fisher Island Ferry passengers who park generally use the Water Street Garage or the Eugene O'Neill lots. The report indicated that on busy summer days, these facilities reportedly fill up and some ferry passengers need to park at the Governor Winthrop Parking Garage further away. The Julian/Mariner Square parking lot is also used.

Rail and Bus

Shore Line East estimated that their ridership would grow modestly over the next several years and that their commuter rail service may be extended east of New London to Westerly, Rhode Island, though that is contingent on Connecticut state funding.

A 2018 posting on the CT Department of Transportation Web site stated that Shore Line East between New Haven and New London serves approximately 55,000 riders per month, both commuters and leisure travelers.³ An Amtrak document stated that in FY2017 there were

¹ <https://www.theday.com/article/20180322/NWS01/180329757>, Accessed 4/26/2018

² New London Downtown Transportation and Parking Study, February 2017, Executive summary, page 6

³ <https://ctrides.com/ways-to-commute/train>, Accessed April 14, 2018

161,916 boardings and alightings at the New London Station. Amtrak total boardings and alightings in FY2017 at all CT stations totaled a little over 1.5 million.⁴

SEAT and Greyhound bus ridership in downtown New London are projected to increase modestly over the next five years.

⁴ <https://www.amtrak.com/content/dam/projects/dotcom/english/public/documents/corporate/statefactsheets/CONNECTICUT17.pdf>, Accessed April 14, 2018



2020 Update to the National Coast Guard Museum Strategic Master Plan

New London, CT

Contract No. 47QRAD20D1096
Order No. 70Z02320FGPH02600
March 22, 2021

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ABOUT THIS REPORT

This report is the update to the National Coast Guard Museum (NCGM or Museum) Strategic Master Plan (SMP) prepared in 2008. Prior addenda to the SMP were prepared in 2014 and 2017. This update summarizes key findings of the SMP, 2014 Addendum, 2017 Addendum, and provides an update of the activities associated with the development of the NCGM as of 2020.

2008 Strategic Master Plan

The 2008 Strategic Master Plan, also referred to throughout this document as the “SMP” and produced by museum consultant White Oak Associates, was developed with the assumption that the Museum would be located in the Fort Trumbull redevelopment area of New London, Connecticut, adjacent to a state historic park. The location was also close to the local Coast Guard station, a Coast Guard research center, and in the same city as the Coast Guard Academy (CGA). The expected development of an adjacent hotel and conference center as well as water taxi service from downtown would further enhance the site.



Visitors to the Museum would discover the past and present of the United States Coast Guard (USCG or Coast Guard) through two different wings of exhibits. The portion of the Museum focusing on the past would have a traditional history museum feel, while the areas telling the story of the present-day Coast Guard would be developed as a range of hands-on, experiential learning activities similar to a science center. Together, these experiences would reveal the USCG’s impact on daily life ranging from shipping of consumer goods to life saving and disaster response.

The Museum would primarily serve a regional audience, although tourists and members of the USCG would also be important audiences. The Museum would be built through a \$65M fundraising effort undertaken by a nonprofit organization, then gifted to the USCG.

2014 Addendum to the 2008 SMP

The 2014 Addendum, produced by museum consultant White Oak Associates, addressed relocating the Museum to the waterfront in downtown New London (Figure 1). The new site was behind the historic train station and directly adjacent to the ferry terminal. While the site brought the Museum into a more central location, it also

presented many challenges. It was significantly smaller, abutted active rail lines, would require a bulkhead with waterfront fill, and was in a flood zone. However, in the end, largely because of the high-visibility central location, it was judged roughly equal to the Fort Trumbull site.

Because of the constrained site, the building would be smaller than what had been proposed for Fort Trumbull. The designers still envisioned two wings, one of which would offer more of a "black box effect" for sensitive items, and another wing that would use the light and views of the waterfront as a backdrop for interactive exhibits. These exhibit concepts were not formalized as the project had not yet retained an exhibit designer.

The shift in location also corresponded to a shift in potential audiences. Now in downtown, tourists were expected to outnumber local and regional visitors, especially in the summer months. At the same time, the smaller size of the new site meant that most of the areas to support field trips, group visits, and educational offers were eliminated in the concept design reducing the Museum's ability to serve local audiences. Despite the smaller building, the fundraising goal was increased to a maximum of \$80M, in part because of the complexities of the new site. The completed building would still be donated to the USCG to operate.



Figure 1. NCGM Site Area Map

Source: NCGM Construction Documents, 2019

2017 Addendum

The 2017 Addendum, produced by museum consultant White Oak Associates, responded to developments in building design, exhibit concepts, and a need for more up-to-date information about potential visitation and operational costs. Constraints related to the downtown site did not change, although a commitment of \$20M from the State of Connecticut to finance a pedestrian bridge would address some of the access issues.

Boston-based architecture firm Payette reshaped the 2014 architectural concept into a larger, taller structure with sweeping views of the waterfront. Exhibit concepts developed for the new building fully embraced a science center-like museum, using the glass as a starting point to develop light filled, hands-on exhibits appropriate for families. Complimenting these exhibits would be the Science, Technology, Engineering, and Mathematics (STEM) Learning Center, a high-tech space designed to immerse youth and adults in science, operations, and leadership strategies inspired by the USCG. Interpretive and educational planning efforts undergirded this work.

The 2017 Addendum retained the same expectations for visitation as the 2014 Addendum. The introduction of the STEM Center was expected to offer more opportunities for engagement with local students. Rental space for events also became a more important part of the building. The overall capital budget grew to approximately \$137M.

2020 Update

This 2020 Update, produced by Procon Consulting and museum consultant Museum Insights, provides current updates, analysis, and projections on topics including programs, budgets, attendance projections, design, and partnerships, while also streamlining and integrating the SMP and subsequent addenda into one, easily referenced document. This 2020 Update also includes updates to the most significant areas of risk and potential mitigations evident at this stage of development.



U.S. Revenue Cutter Bear, circa 1890, on patrol off Alaska
Painting by James A. Mitchell, III

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EXECUTIVE SUMMARY

Mission

The National Coast Guard Museum will support the Coast Guard mission by inspiring and engaging the general public and the Coast Guard community to celebrate the Coast Guard men and women and their accomplishments, past, present, and future.

About the Museum

Located in downtown New London, Connecticut, the Museum is sited on the waterfront and adjacent to a multi-modal transportation hub. In this central location:

- The Museum's dramatic architecture and dynamic visitor experience will increase the public's understanding of and appreciation for the work of the USCG.
- The Museum's exhibits will serve as an authentic place for current and former service members to reflect on their experiences in the USCG and share them with others.
- The Museum's educational programs for students and adults will focus on STEM topics and leadership development.
- These activities will be accomplished through exhibits, public programs, educational outreach, and a specially programmed STEM Learning center.

2020 NCGM Updates

Anticipated Opening:
Late 2024 (Building Completion)
Early 2025 (Grand Opening)

Estimated Capital Budget:
\$119.9M (NCGMA)
\$48.2M (USCG)

Projected Annual Visitors:
200K – 300K

Estimated Annual Operating Budget:
\$6.5M

While these central aspects of the Museum program have not changed significantly since the last update in 2017, the Museum's exhibit approach has shifted from a focus on Coast Guard-themed interactive exhibits, much like a modern science center, to an artifact-rich and immersive historical focus, similar to that in other major military museums.

Design and Construction

The Museum Building

Design and construction of the Museum's building (but not its exhibits) remains the responsibility of the National Coast Guard Museum Association (NCGMA), a private nonprofit organized to raise funds for and to oversee the building of the Museum. Payette, a Boston-based architecture firm, completed building design through the construction documents phase in 2019 (Figure 2). The design is ready for permitting once funding is in place.

A pedestrian bridge connecting the Museum to a nearby parking garage is also part of the project, with funding from the State of Connecticut. Necessary environmental permits are currently in process and are expected to be resolved by summer 2021. Once these remaining regulatory compliance and permitting actions are completed, NCGMA may commence with construction. Assuming the schedule for NCGMA's fundraising goals are met and no unanticipated discoveries or delays occur, the NCGMA is on track to complete construction of the museum building in 2024.



Figure 2. NCGM Architectural Rendering
Source: NCGM Construction Documents, 2019

Visitor Experience

As of March 2021, the Museum's exhibits, overseen by the USCG, are in the design development phase. Exhibit plans are expected to be completed by the end of 2021 and fabricated to align with the Museum's opening. Exhibit plans are being developed by a firm with substantial experience with other military museums. The exhibit plan identified five themes to tell the story of the USCG:

- Lifesavers Around the Globe
- Champions of Commerce
- Protectors of the Environment
- Enforcers on the Seas
- Defenders of Our Nation

Each of these stories will be explored through “black box” and other immersive techniques to connect visitors to the past through artifacts ranging from the iconic Katrina axe and lighthouse lenses to uniforms and other personal items belonging to USCG personnel.

Contributing Components

With their primary focus on fundraising for the building, components overseen by the NCGMA remain in process. These include the development of a plan for the STEM Center experience and business plans for the revenue generating operations such as the museum store, café, and event rentals.

Market and Attendance

Based on a market penetration analysis and regional comparables, the Museum is currently expected to attract between 200,000 and 300,000 visitors each year. Primary visitor groups include cultural tourists seeking an unusual destination, regional residents participating in ongoing programming, and active duty and former Coast Guard personnel and their families connecting or reconnecting with the Coast Guard’s past, present, and future.

Operations

Staffing

Once open, the Museum will employ approximately 30 civilian and Coast Guard FTEs. Professional roles will include the director and deputy director, curator, director of exhibits and programs, and administrative support staff.

Operating Funding

Once open, Museum operations, estimated at \$6.5M yearly, will be supported as part of the USCG’s annual budget with additional support from the NCGMA or similar nonprofit partner.

Additional Operating Support

If permitted, the partner nonprofit will manage revenue generating operations at the Museum including the museum store and café, the STEM Center, a membership program, and function rentals. Depending on the final funding model for the construction of the Museum, construction loan payments may require funds from the non-profit partner for several years after opening.

Pre-Opening Costs

Pre-Opening Staffing

Staffing for the Museum begins long before opening. The USCG has dedicated temporary staff to this project for several years. The project now has an experienced museum director, and a prioritized plan is in place to begin filling additional roles. Staff are needed to guide development of the Museum’s visitor experiences and to develop operating policies and procedures for the Museum. The Museum plans to fill multiple additional positions in next two years with the expectation that the full complement of staff will be hired by opening day. Total pre-opening staff cost is estimated as \$6.4 million.

Pre-Opening Operations

Pre-opening staff will need offices and work areas and other administrative support, estimated as approximately 30% of overall pre-opening salaries for a total of \$1.9 million.

Fundraising

The NCGMA is committed to raising the funds needed to build the Museum. The Museum's opening schedule is dependent upon the NCGMA's fundraising success.

Capital Budget

The Museum's capital budget (Table 1) is shared by the USCG and the NCGMA. The amounts are based on USCG allocations and NCGMA cost estimates. The USCG carries a 10% contingency to address unforeseen circumstances. The NCGMA incorporates a 3% contingency as part of their construction budget.

	USCG	NCGMA
1. Museum, Bridge, Site, and Bulkhead Construction	—	\$85,500,000
2. Owner's Costs (Building Associated or Soft Costs)	—	13,300,000
3. Museum Equipment	2,400,000	—
4. Program Costs (Including Visitor Experience and Exhibits)	25,200,000	—
5. Pre-Opening Costs and Project Management	16,200,000	21,100,000
6. Project Contingency @ 10% of capital costs	4,400,000	—
Total Estimated Project Costs	\$48,200,000	\$119,900,000

Table 1. NCGM Capital Budget
Source: NCGMA and USCG, 2020

Risks and Mitigations

Potential Risks

Ambitious museum building projects are fundamentally risky undertakings. They face many similar risks at this stage of development. Principal risks potentially include:

- Insufficient capital will be raised forcing the project to downsize, phase, or stop.
- Insufficient contingency funds may force undesirable changes during construction.
- Debt incurred to address any fundraising gap can be very difficult to repay.
- Changes in command priorities could affect the Museum's funding and support.
- Communication challenges may disrupt the careful coordination that is necessary between building design and visitor experience development.

Possible Mitigations

Both the USCG and the NCGMA are committed to the success of the project. The current successes are evidence that risks such as these can be mitigated. Maintaining the following standard mitigation procedures will reduce risk:

- Increased transparency about fundraising goals, feasibility, and progress.
- Increased contingency funds that address all areas of the project.
- Openly discussing risks and mitigations.
- Strong written agreements about expectations.
- Shared setting and evaluation of Key Decision Point (KDP) checkpoints and approvals.

The most important mitigation is to not start any expenditure until sufficient funds have been received or contracted for and all approvals obtained for that expense.

Twelve years after the completion of the SMP, the NCGM remains a powerful idea that is moving closer to fruition. If risks are thoughtfully mitigated and gaps are addressed as necessary, the Museum is poised to become an important place for the public and the USCG alike.

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CHAPTER 1: MISSION, PURPOSES, VALUES, AUDIENCES, AND SUPPORTERS

Note regarding Chapter 1: The SMP titled this Chapter Vision, Purpose and Values. The title was changed to Vision, Purpose and Values Update in the 2014 Addendum. In the 2017 Addendum, the chapter title changed again to Mission, Purposes, Values, Audiences, and Supporters.

2008 Strategic Master Plan Summary

The SMP began with the premise that there was strong support for the proposed Museum as well as precedent; all of the other military branches had museums. It also noted the key role of a non-profit, the NCGMA, to support the development of the Museum. The SMP would inform the USCG's decision to develop a museum through an assessment of proposed sites, finances, and community needs. These assessments would lead to the development of a museum concept based on the USCG's desired outcomes.



Policy Workshop

During the development of the SMP, the Museum Oversight Group, which consisted of USCG high level leaders and a USCG historian, took part in a policy workshop designed to help clarify the Museum's goals, audiences, programs, and financial model. The workshop revealed that there was consensus within leadership on the Museum's mission and operations. The Museum's top priority would be to tell the story of the USCG, both past and present, and to depict the breadth of its missions. The Museum would primarily serve tourists and would offer a high-quality visitor experience. The Museum would mostly be supported through endowment, grants, donations, and an annual federal appropriation, although the group hoped that an associated non-profit would cover the majority of the operating expenses. The group favored a functional building rather than a design from a well-known architect.

The results of the policy workshop also guided the development of a set of values for the future Museum that in turn would drive mission and vision statements:

- **Mission:** *To build awareness of the United States Coast Guard and engagement with its programs by exploring the Coast Guard's rich history, current life, and future potentials through public exhibits, theaters, programs, and other museum-quality learning experiences.*
- **Vision:** *The new NCGM [National Coast Guard Museum] will be a multiple mission, collection-rich and popular museum that is always ready to serve the missions of the US Coast Guard. From its base in the hometown of the Coast Guard Academy, the Museum will grow to global impact.*

The Mission would be supported by the following prioritized institutional objectives:

- Build awareness of the USCG
- Tell the Coast Guard story
- Build engagement
- Provide public education and other service
- Promote Team Coast Guard (Enlistment)
- Support the CGA
- Build public relationships
- Provide economic benefits to New London and the region¹

In turn, several guiding principles directed the fulfillment of the objectives:

- The Museum would be a popular, visitor-focused Museum that is a public resource.
- Programs would be based on its collections and scholarship and the work of the Museum would continue to grow the understanding of the USCG.
- The Museum would be both a community resource and an international institution.
- The Museum's operations would be based on sound economics, and designed to adapt to meet new realities and visitor's needs

The SMP recognized that the mission, vision, institutional objectives, and guiding principles were representative of long-term goals, which might be best done in phases. Moving to future phases required both prior success and a realistic economic model to ensure the Museum's operating needs would be met.

2014 Addendum Summary

The addendum focused on revisions to the Museum's mission, vision, and objectives, as well as the relationship to NCGMA.

As Museum planning continued, the mission was evolving. A new mission statement reflected increasing emphasis on partnership, STEM learning, and the goal of making the Museum the hub for history within the USCG. The new mission statement read:

To build awareness and appreciation of the United States Coast Guard and engagement with its programs by exploring the Coast Guard's rich history, current life and future potentials through interactive public exhibits, partnerships, programs and other museum-quality learning experiences.

Institutional objectives and guiding principles were not substantively revised in the 2014 Addendum. ²

¹ Please note that institutional objectives were not included in Chapter 1 in SMP, but instead appeared in chapter 4. As the institutional objectives appear in chapter 1 in both 2014 and 2017, they have been included in the SMP summary for the reader's convenience. Please see SMP Chapter 4, page 4-1 for more details.

² In 2017, institutional purposes were renamed intentional purposes.

Relationship to the NCGMA

The 2014 Addendum described a close operational partnership between the Museum and the NCGMA. The USCG would manage many aspects of operation and management, while the NCGMA would manage all revenue generating activities and fundraising. The plan noted that this split in management areas is common among university and government operated museums, and that it is often successful. The addendum anticipated that this relationship would stay the same, although the new site and concept design eliminated many program spaces including theaters. As a result, the addendum scaled down expectations for earned revenues.

In 2008, the NCGMA was a part of the US Coast Guard Foundation which offered the NCGMA additional staffing, infrastructure, and access to experienced fundraisers. By 2014, the NCGMA was an independent non-profit. It was still anticipated that the NCGMA would raise all funds necessary to build the Museum, and then turn a completed, lien-free building over to the USCG. At that time, the addendum assumed that the NCGMA would continue, but pivot to managing contracts for revenue generating activities, as well as continue fundraising activities in support the Museum's operations and endowment.

2017 Addendum Summary

The 2017 Addendum combined Chapter 3 (Visitors, Brand Customers, and other Partners) and Chapter 4 (Community Service Objectives) into Chapter 1. Since 2014, the Museum Exhibit Advisory Panel (MEAP), which included members of the USCG and the NCGMA, worked to develop a Preliminary Master Interpretive Plan (2017 Preliminary MIP) (Exhibit A), completed in May 2017. The plan provided the following revised mission and vision statements:

- **Mission:** The National Coast Guard Museum will engage the public with a variety of artifacts, exhibits, interactive experiences, and education programs designed to celebrate the Coast Guard men and women and their accomplishments in the past, present, and future.
- **Vision:** The National Coast Guard Museum will inspire, inform, and engage visitors by honoring the courage and skill of the men and women of the United States Coast Guard.

However, in a table comparing mission and vision statements between 2008 and 2017, the Museum's mission statement remained the same as in 2014. It is uncertain if the Museum's mission was formally changed as a result of the MEAP process. The language from the mission statement developed in the MEAP process is in use in NCGMA publications, including the 2020 annual report.

The 2017 Addendum also included the following mission statement for the NCGMA:

The National Coast Guard Museum Association (NCGMA) is a 501(c)3 Non-Profit Charitable Organization formed in 2001 to raise funds and apply for and administer federal and state grants for the sole purpose of acquiring land, designing, constructing, developing exhibits and turning over to the US Coast Guard a national museum in the city of New London, Connecticut.

While the Museum's institutional purposes and guiding principles did not substantively change from 2008 or 2014,³ the MEAP committee shifted the Museum concept towards a heritage and interactive discovery center that would better engage youth and the general public by filling a community need for STEM education.

Audiences

Following a new policy workshop with USCG leadership in November 2017, the 2017 Addendum updated the audience priorities as follows:

- Primarily for tourists.
- Secondly for local residents, regional school children, and teachers.
- Adult in tone but welcoming to families.
- Serving the public is more important than serving the USCG family, though their interests can still be served.
- The Museum's programs and components can serve the USCG, too.

Other changes impacted potential visitors and were described in detail in Chapter 12. The addendum also noted that the new design allowed the Museum to serve residents with a variety of programs and that with a new, younger, and more educated population with an interest in living downtown, these programs might have a large audience.

Supporters

The USCG would own and operate the Museum. For this reason, the 2017 Addendum asserted that the Museum should primarily serve the USCG and the public who provide funds for the Museum via tax dollars and donations.

The NCGMA continued to be seen as critical for its role in raising funds for construction. The addendum assumed that the NCGMA would stay active with post-opening fundraising campaigns to fund additional "margin of excellence" programs. The plan concluded that it was too speculative at this stage of development to assume that these activities would generate net revenues or be a source of predictable ongoing support for the Museum. As such, the addendum assumed that all core operations would be funded and operated by the USCG. In addition to the NCGMA, volunteers would serve as docents, interns, and advisors, and partner organizations would provide in-kind services, promotional activities, and audiences.



³ Please note that the 2017 addendum refers to intentional purposes instead of institutional purposes. The two terms are used interchangeably to represent the same concept.

2020 Update

The USCG finalized a new Master Interpretive Plan in March of 2020 (2020 MIP)(Exhibit B), which revised the mission statement as follows:

Support the Coast Guard mission by inspiring and engaging the general public and Coast Guard community to celebrate the Coast Guard men and women and their accomplishments, past, present, and future.

This mission statement, along with the 2020 MIP (Exhibit B), will provide the foundation for the Museum's development and eventual opening.

Reflection

The current 2020 version of the Museum's mission statement reflects an effort to simplify the mission. It is essentially the same as the 2017 mission except reference to the specific tools that the Museum will use is removed ("artifacts, exhibits, interactive experiences, and education programs").

The Museum will still use all of these methods to engage and inspire the Museum's constituents, ranging from STEM-based programs to immersive historical experiences. The specific approaches chosen in the visitor experience design process will depend on what approach will be most effective for a given purpose and a given constituent group.

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CHAPTER 2: COMMUNITY NEEDS ASSESSMENT

2008 Strategic Master Plan Summary

The SMP conducted research into New London and the surrounding region through market statistics, regional portraits, tourism data, and other resources. In addition to this research, the planners also conducted interviews with 28 stakeholders in Washington, DC, and New London. As described in chapter 1, USCG interviewees saw a clear need for the proposed Museum and were enthusiastic about its potential.

Regional Characteristics

Regional residents and leaders were also enthusiastic about the Museum as a way to help with the redevelopment of New London. As will be documented in greater detail in Chapter 12, New London was a blue-collar community in decline, although it aspired to bring its maritime heritage together with modern seafaring to reshape the city into a thriving urban community. Such a dramatic change would require significant investment in redeveloping parts of downtown to include more housing units and to support the development of an arts and entertainment district. There were some encouraging signs in 2008, like new construction and better-quality restaurants, but there was still much to be done. Interviewees indicated that New London residents were civically engaged. While there was disagreement about the best ways to improve New London, residents were supportive of the USCG and the potential economic benefits that a Museum might bring to downtown.



Regional Tourist Attractions

New London was also very close to other Mystic area attractions, which had developed a strong marketing identity. There was interest in linking to these attractions and in taking advantage of their expertise and facilities. For example, Mystic Seaport's collection storage facility could possibly accommodate the USCG collection, bringing it to one, museum-quality storage center for the first time. The planners concluded that the Museum could have a positive impact on the local economy and the lives of residents, and the Museum concept was endorsed by the USCG and welcomed by the City of New London (City or New London).

2014 Addendum Summary

This chapter was not updated in 2014.

2017 Addendum Summary

This chapter was not updated in 2017.

2020 Update

The assumptions and conclusions about community needs have not been reassessed since 2008. In the intervening years, the Museum moved to a new site and made substantive changes to planned programming, but it retains the possibility of being a significant asset for the City of New London, perhaps jump-starting the long sought-after revival of the once vibrant downtown. The Museum would be a cultural anchor for the east end of State Street, balancing the Garde Theater at the west end. It would also anchor the north end of the City's Maritime Park and provide a nationally significant destination. All of these things would benefit the New London Community.

CHAPTER 3: VISITORS, BRAND CUSTOMERS, AND OTHER PARTNERS

2008 Strategic Master Plan Summary

The SMP explored the different types of people who might visit the Museum and the kinds of facilities and programs that would be necessary to meet their needs. The SMP identified four main groups: visitors, community members, brand customers, and donors/sponsoring investors. Visitors were the most important constituency because their visits would bring in revenue through on-site spending and demonstrate to donors and community organizations that the Museum was worthy of ongoing support.

Visitors

Visitors would arrive with a wide range of interests and would be primarily served by the exhibit galleries and theaters. The SMP further divided visitors into primary and secondary regional markets, regional schools, and tourists, which could in turn help project the kinds of programs and attractions the Museum should offer. Programs could be further refined by considering these six key visitor segments: Adults visiting with Children, School and Youth Groups, Adults 34+ visiting with Children, Young Adults 18-34 without Children, Teens 13-18, and Solo Visitors 18-75+. By comparing these groups with the four market segments, it then identified “prime segments” which should direct the development of the visitor experience, in this case for adults with and without children and school and youth groups. In developing those experiences, the SMP noted the importance of understanding why visitors come to museums and provided a list of visitor motivations and behaviors.



Brand Customers

Brand Customers, a new concept at the time of the report, posited that some visitors are particularly interested in additional programs and services beyond the Museum’s galleries because of their deep connection to the content and/or because they trust the Museum to provide engaging and educational opportunities. Brand customers included current and former USCG members, members of the military, and maritime enthusiasts, as

well as regional residents, especially student groups. Programs for brand customers could include citizen science programs, USCG Reunions, summer camps, boating safety programs, travel programs, function rentals, and online programs.

Community Audiences

Community audiences related primarily to partnerships. Partnerships could include other museums, public agencies, local business, environmental NGOs, educational groups, and military related organizations. As the USCG annual budget would support most, but not all aspects of Museum operations, partnerships were especially important as a way to develop relationships that could lead to sponsorship or donation to fill these gaps.

Donors and Investors

Finally, donors (seen here as “investors”) were an important audience because they would ensure the ongoing fiscal health of the Museum and decrease the amount of USCG funding needed. The SMP proposed that the Museum should look for investors in the following areas: education, quality of life, the USCG’s future, Connecticut’s future, economic development, learning programs and infrastructure, environmental stewardship, community building, visibility to select markets, collection conservation interpretation, and in current and former USCG personnel.

2014 Addendum Summary

This chapter was not updated in 2014.

2017 Addendum Summary

This chapter was combined into Chapter 1 in the 2017 Addendum. Please see chapter 1 for the 2017 Addendum Summary.

2020 Update

See Chapter 1.

CHAPTER 4: COMMUNITY SERVICE OBJECTIVES

2008 Strategic Master Plan Summary

The SMP defined Community Service Objectives as how institutional objectives would be met. The SMP identified the following prioritized list of institutional objectives for the proposed Museum:

- Build awareness of the USCG
- Tell the story
- Build engagement
- Provide public education and other service
- Promote Team Coast Guard (Enlistment)
- Support the CGA
- Build public relationships
- Provide economic benefits to New London and the region

The Primary Objective

The primary community service objective for the Museum was to increase the Coast Guard's visibility through exhibits, public programs, and demonstrations of cutting-edge USCG research taking place nearby. These efforts would help the public develop a greater appreciation for the work of the USCG and how the USCG impacts their daily lives, from commerce to boating safety. The SMP identified NASA's Public Information Office during the 1980s and 1990s as a good model and believed that better understanding of the USCG would lead to a more supportive environment for funding increases.

Preserve and Interpret

Closely related to the primary objective, the next four objectives called for the Museum to preserve and interpret the USCG's past and present in a compelling manner. These objectives would in turn strengthen bonds between current and former USCG personnel, drive enlistment, and provide a public space to show the very best the USCG has to offer. Leading by example—perhaps becoming a leader in the environmental protection of the Thames River Watershed and by running water safety programs—would be one way to showcase the breadth and excellence of USCG missions.

Additional Objectives

The Museum would develop public partnerships that would nurture the national understanding of military and maritime history, as well as drawing more people to New London and Southeastern Connecticut. As such, the Museum would provide economic benefit to New London and the region by drawing tourists, as well as fulfilling



the promise of the Fort Trumbull development. The Museum would also offer programs that would serve the interests of New London's residents.

Financial Objectives

The chapter closed with a summary of the financial objectives for operations. The main objective was to create a sustainable organization that would leverage both USCG funds, in-kind donations, and other sources of funds. In order to achieve this, the USCG and the NCGMA would do the following:

- Open without long-term capital debt.
- Adopt a business structure to allow the Museum to meet its mission for visitors, outreach constituents and investors/supporters.
- Generate enough net revenue to operate the Museum as envisioned in the SMP, including securing long-term support from other organizations and agencies.
- Update and adapt exhibits and programs to stay connected to the community.
- Start with a small endowment seeded from the capital campaign and continue to grow the endowment so that the Museum will operate with less support from the USCG.

2014 Addendum Summary

This chapter was not updated in 2014.

2017 Addendum Summary

This chapter was combined into Chapter 1 in the 2017 Addendum. Please see Chapter 1 for the 2017 Addendum Summary.

2020 Update

See Chapter 1.

CHAPTER 5: SITE SELECTION PROCESS

2008 Strategic Master Plan Summary

In 2008 a Museum for the USCG had been under discussion for many years, with multiple sites under consideration including locations on the Battery in New York City and at the National Harbor near Washington, DC. The Battery site was especially appealing because it was a waterfront site with an existing Coast Guard building and located near the ferry terminal for the Statue of Liberty.

(b) (5)

New London had much to offer because it was “Connecticut’s ocean corner,” had a well-established USCG presence at the Coast Guard Academy (CGA or Academy) and had community enthusiasm for becoming known as home of the USCG, much as Annapolis is the home of the US Navy. Similarly, New London was close to well-established tourist attractions that are also focused on the sea and maritime tradition and was located on major transportation corridors. At the same time, New London was in decline, and would need significant revitalization to be perceived by visitors as a safe and welcoming place. The City, residents, and the planners believed that the Museum could be an important catalyst for revitalizing the City.

When Federal legislation passed in 2004 (14 USC 98) required that the Museum be built in New London, Connecticut, the USCG shortlisted five sites in the City: the current Museum site at the CGA, Riverside Park near the CGA, and three locations within the Fort Trumbull redevelopment area, just south of the City center.

The SMP provided a list of 35 site evaluation criteria. These can be condensed and summarized as follows:

- Fits the Museum building comfortably with room for expansion.
- Provides ample room for parking including for RVs and school buses.
- Is easy to find and appealing to both tourists and residents. The site is a safe place visit during the day and at night.
- Suited to developing sources of earned revenue through food service, shopping, and programming; it can become a destination for more than just visiting Museum galleries.
- Extent of any obligation to work with other parties such as the City or the New London Development Corporation for site preparation and infrastructure development.
- Operating costs controllable with either outright ownership of property or token leases of \$1/year.
- Environmental issues minimal or resolved.
- Zoning and other procedural hurdles minimal or nonexistent.
- Few constructability challenges.
- Space for outdoor programming and is an appealing landscape with access to the water.
- Could be acquired, developed, and Museum open within the desired timeframe.

The SMP applied these criteria to the five proposed sites and made recommendations.

The Coast Guard Academy Site

The site at the CGA had inadequate area for the Museum and constraints to public access that would severely limit visitation. Further, this space had already been tentatively reallocated for other uses, assuming that the Museum was moving to another site. For these reasons, the CGA site was not recommended.

Riverside Park Site

The SMP also did not recommend Riverside Park (adjacent to the CGA), citing reluctance by the city to give up green space as well as site challenges including grade and proximity to major roadways. Given this, the SMP determined that the three sites at Fort Trumbull were the most promising.

Fort Trumbull Sites

Fort Trumbull was an attractive location for several reasons. First, the site was adjacent to the recently renovated Fort Trumbull State Park and the new Pfizer research complex, close to the existing New London Coast Guard Station, and near the outer harbor berth for the Coast Guard's square rigged training ship, *Eagle*. Other infrastructure developments and improvements were anticipated. Still, selecting a Fort Trumbull site counted on infrastructure and wayfinding improvements led by the city, whose budgets were already strapped, and that additional transportation like a water taxi would be developed to get visitors from downtown to the Museum.



The three parcels under consideration at Fort Trumbull were Parcel 1, to the north and abutting a planned hotel development, Parcel 1A adjacent to Parcel 1, and the “original site,” near the middle of the development area on a rocky promontory with excellent views. However, the original site had been part of an eminent domain lawsuit that ended up in the U.S. Supreme Court. Because of the emotional legacy of the eminent domain fight, as well as the constructability and access issues, the original site was not recommended.

Parcel 1 and Parcel 1A offered different opportunities. Parcel 1 was partially allocated for the development of a hotel following the authorization of the Museum, meaning that a shared site plan would need to be developed. In contrast, Parcel 1A would not be shared, but it also did not include space for a parking lot, which would need to be provided through another parcel. Parcel 1A had the advantage of being separated from the water's edge

by a city owned walkway, which would free the Museum's architectural planning from some water-related insurance and regulatory issues. Either parcel could accommodate Coast Guard cutters docking and helicopters landing, a priority for the Museum Oversight Group. Reviewing both sites, the planners recommended Parcel 1A, provided that additional negotiations with the New London Development Corporation secured at least 3 acres of the site for the Museum, plus rights to use up to an additional 3.4 acres to accommodate parking for 341 cars and 5 busses at grade or in an equivalent parking structure.

Next Steps

The remainder of the chapter provided a guide for the site finalization process which included completing National Environmental Policy Act (NEPA) compliance; negotiating MOUs with the city, state, and NCGMA to govern site improvements and fundraising; and the development of a site master plan. Once the site master plan was completed, the capital campaign could begin.

2014 Addendum Summary

Between 2008 and the 2014 Addendum, the Museum project moved from Fort Trumbull to a new location downtown. The addendum described the change in location as the most significant change since 2008.

Description of the New Site and Regional Characteristics

The new site, located on the waterfront in downtown New London and abutting the Amtrak Station and ferry terminal, impacted almost every aspect of the project. The new site was easier to access, would see more foot traffic, and could potentially attract higher visitation. Community support for the project remained high, and regional characteristics, including proximity to other tourist attractions like Mystic Seaport, remained unchanged. However, the small site meant that the Museum would likely be smaller. The waterfront site and proximity to the Amtrak station also meant that it would be more complicated and more expensive to build. Even with these constraints, the net impact of the change appeared to be positive.



Figure 1. NCGM Site Area Map
Source: NCGM Construction Documents, 2019

Evaluating the New Site

The addendum applied the same evaluation criteria used in 2008 to the new site. Overall, the new site was preferable to the Fort Trumbull site in some ways, and less preferable in others. In many respects, the two sites were about the same. The following are the main conclusions:

- The constrained site and the expense of building on it would likely keep the Museum small.
- The new site would be significantly more challenging to build on than the Fort Trumbull site.
- Wayfinding to the Museum was likely easier at the new site, but parking could be a significant challenge for the downtown museum.
- The nearby public parking garage could meet the needs of passenger vehicles, but there was neither a bus drop-off area nor bus parking in the vicinity.
- The attendance potential for the new site was seen as greater, but the addendum cautioned against using that alone as the most compelling factor for site selection, especially since architectural decisions and city traffic patterns might impede easy access to the Museum.
- There remained a strong level of support for the Museum.
- Land ownership, operation, and maintenance fees were unchanged from the Fort Trumbull site.
- The new site offered the possibility of good space for outdoor events, and the opportunity to collaborate with the City on existing events held in the area.
- Environmental studies were still being completed but necessary mitigations appeared to be comparable to the Fort Trumbull site.

The addendum assessment was based on the concept design, before environmental impact studies and traffic and parking analysis were completed. The addendum did not make a site recommendation but noted that the USCG and NCGMA leaders were pleased with the site, and that the City of New London and the State of Connecticut were also reportedly pleased by the change.

Next Steps

The chapter closed with recommended next steps, including negotiating MOUs and establishing a site development plan in consultation with abutters and partners. As with the Fort Trumbull site, the addendum recommended building improvements to streets and wayfinding into an agreement with the City of New London. Likewise, the commitment from the state to finance a pedestrian bridge needed to be finalized.

2017 Addendum Summary

This chapter was not updated in 2017.

2020 Update

The NCGMA has been working since 2014 to plan, permit, and raise funds for the Museum on the downtown New London waterfront site. Substantial progress has been made, even as the constraints of the site have become more apparent over time, including concerns about parking, the limited footprint, and the need to build above the FEMA flood plain.

Figure 3 depicts the NCGM waterfront site and the associated land acquisitions and associated site improvements necessary for the construction of the NCGM.

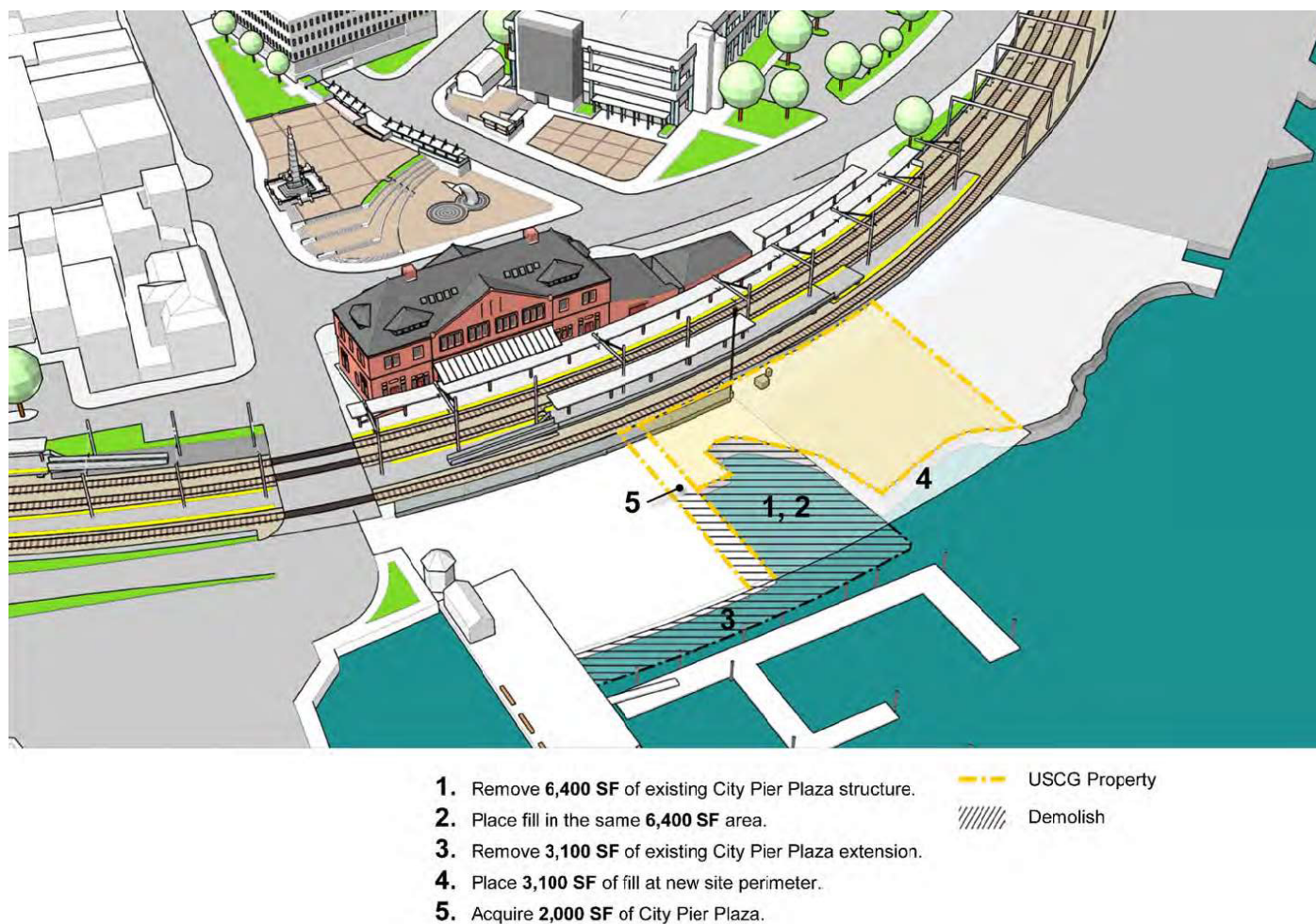


Figure 3. NCGM Site Proposed Land Acquisition
Source: Milone & Macbroom, 2018

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CHAPTER 6: SUMMARY OF THE MUSEUM'S COMPONENTS

2008 Strategic Master Plan Summary

Audiences Served

Following a workshop led by White Oak Associates, the museum planning firm hired to develop the SMP, the NCGM's Museum Oversight Group recommended balancing the presentation of the USCG's past with its current and future role. Activities like a heritage center might appeal more strongly to members of the USCG community, while hands-on exhibits and exhibits showcasing remarkable objects telling the USCG's story would draw the public. Generally adult in tone, the Museum would be divided into three main venues: the museum galleries (free), the feature theater (fee based) and the simulation center (fee based). In addition to these venues, outdoor areas in the adjoining park, including a "Celebration Plaza" provided space for both USCG reunions as well as community festivals, and created connections to the water. The SMP recommended that the USCG consider locating the USCGC Eagle on site, as well as having an area where visitors could watch volunteers restore boats.



Museum Exhibits

The Museum's "Free Zone" included the main entrance, lobby, café, museum store, donation kiosk, "Guardian History Center," entrance to museum galleries, and ticketing for fee-based experiences. Visitors would begin their experience in the introductory theatre for an overview of USCG history and its role in the present. Then, they would explore the "Legacy Galleries," focusing on the past or the "Today/Tomorrow Galleries". The legacy galleries would be long-term, collection focused exhibits, while the Today/Tomorrow galleries would be hands-on. There would also be an Art Gallery, showcasing the USCG's extensive collection, as well as space for changing exhibits. CG Live!, an area in which visitors could interact with real USCG missions, would also be within the free zone. These galleries would open to the "Court of Honor," which could be used for function rentals. Supporting the galleries would be the Museum's collection center. The SMP urged the USCG to follow American Alliance of Museums (AAM) guidelines for collections care and recommended that the Museum pursue AAM accreditation.

Theaters and Interactive Experiences

The fee-based feature theatre and simulation center would bring in revenue as well as serve the local community. The feature theatre, seating 150, would show a large screen presentation on the USCG. After hours and in the off-season, the auditorium would serve as a community film theatre as well as

rental space serving corporate meetings, community forums, and similar purposes. The simulation center would feature a 3D immersive experience that would allow visitors to virtually take part in a USCG rescue at sea.

Education Outreach

The plan called for a Learning Center, which would offer two learning labs, bus drop-off, and access to the water for science-based programs such as water sampling and testing. While targeted at student groups, the SMP proposed that adult education programs could also use these spaces. In addition to in-person learning, the plan also proposed a robust virtual learning framework. Support facilities, including staff offices, maintenance areas, and loading areas would also be necessary to support Museum operations.

2014 Addendum

New Site and Concept Design

The 2014 Addendum recognized that the move to a smaller, more constrained site in downtown New London meant that some of the Museum's components needed to change, resulting in eliminating the Court of Honor, feature theatre, simulation center, Learning Center, collection center, and outdoor park. A concept design for the downtown building, developed by the architectural firm Gauchat/Santos, called for galleries spread across three floors in a building raised above the potential flooding hazards.

Museum Exhibits

The addendum maintained the same division of galleries between past and present, giving 7,500-9,000 Square Feet (SF) to the Legacy Galleries, which would require additional security, and light and climate-controlled conditions appropriate for collections. The new design also retained the Art Gallery and CG Live! at sizes comparable to the SMP. The Today/Tomorrow Galleries expanded to 8,000-12,000 SF and would be interactive and family oriented. These exhibits would be day-lit and would not require collections-level controlled conditions. Additionally, the Museum would put more emphasis on virtual, educational outreach. These changes, along with a note to decrease contemplative exhibits and increase interactive exhibits that emphasized STEM learning, marked a significant change in the Museum's exhibits. The addendum noted that both Gallagher Associates, then the Museum exhibit designer, and the USCG Historian's office considered their involvement to be critical but had been unable to collaborate on the new concept design.

Integrating Technology and Revenue Generating Activities

The addendum recommended that some portion of the Today/Tomorrow galleries could be reserved for traveling exhibits in the off-season, in an effort to attract local and regional residents and generate additional revenue. Likewise, mobile apps or audio tours could also be revenue generators, although the SMP cautioned against investing in any one technology until the Museum was very close to opening. At the same time, the expanded Event Center, taking up 5,400 SF spread over the 4th and 5th floors and replacing the feature theater, opened up new possibilities for revenue from event rentals. The addendum's research indicated that there was a need for more wedding venues in the area and that the Museum might be able to fill this need if marketed appropriately. The addendum further recommended bringing in a museum catering and event planning consultant to assist with defining necessary space needs, such as rooms for the wedding couple, as the event center concept developed.

Parking and Facility Challenges

The addendum highlighted parking and facility support challenges with the new site and the new design. While visitors could park in a nearby parking structure, the Museum would not have dedicated parking or a convenient drop off area at the front of the Museum in the new location, which could adversely impact the visitor experience. Likewise, the new architectural concept did not make it clear if there was sufficient support space for staff offices and other behind-the-scenes work areas. The addendum recommended additional study on both parking and support spaces.

2017 Addendum

Planning for the Museum's Components

This chapter of the 2017 Addendum documented all of the currently proposed Museum components, with priorities still under discussion as the building design continued to evolve.

The 2017 Addendum also addressed the following significant initiatives:

- Reinforcing the Museum's concept to focus on both heritage and interactive discovery
- Development of a 2017 Preliminary MIP by the MEAP (Exhibit A)
- Preliminary Phase I and Phase II Reports from the Museum Education Initiative (MEI) group

The efforts to develop the 2017 Preliminary MIP (Exhibit A) and Museum Education Initiative (Exhibits C and D) involved collaboration, support, and input from the NCGMA, USCG, and other stakeholders. These documents further informed updates to the concept designs and also included a directive that “the Museum is not the steward to the collection, but the recipient of long-term placement of objects in the Coast Guard's Heritage Asset Collection,” meaning that collection storage and care facilities no longer needed to be included in the design for the Museum building.

Museum Design and Architecture

The addendum was developed in parallel with a new architectural concept by Boston-based Payette architects which resulted in the reallocation of some of the interior spaces (see Chapter 20).

Theater

The updated concept design retained many of the features of previous plans, including the reintroduction of a wide-screen, 150-seat “feature theater” that could accommodate film screenings and a stage for presentations or performances. The theater could also be used after hours for revenue generating activity.

Museum Exhibits

In a major change to the exhibition focus, five “wings” spread across three floors would develop the story lines outlined in the 2017 Preliminary MIP (Exhibit A): Lifesavers Around the Globe, Champions of Commerce, Protectors of the Environment, Enforcers on the Seas, and Defenders of Our Nation. A sixth wing would contain the art gallery and space for rotating exhibits.

Margin of Excellence Activities

The addendum introduced the concept of “Margin of Excellence.” These activities were designed to enhance the visitor experience and generate revenue through the Event Center, STEM Center, and Qualification Program.

The Event Center would potentially generate revenue through rentals for special events. The new Qualification program could unlock experiences in the exhibits to visitors for a fee. If visitors completed enough activities, they would have an opportunity to complete an activity in the STEM Center.

The new concept for a STEM Center reflected a new emphasis on STEM activities, which were now proposed to permeate all aspects of the visitor experience. For student groups, the STEM Center would offer hands-on opportunities designed to reinforce STEM concepts through laboratories, discovery stations, a simulation and gaming center, and a Rescue Coordination Center. These activities, many of which relied heavily on simulation activities and virtual reality, were intended to progressively meet the needs of students throughout their schooling. The plan also placed a new emphasis on early learners (pre-K), featuring an Early Learning Center with a STEM focus. The emphasis on virtual learning remained the same as in 2014.

Outdoor Activities and the USCGC Eagle

While the new site did not have the same outdoor opportunities, the addendum proposed mooring the USCGC *Eagle* near the Museum as much as possible. It also suggested bringing other historic sailing ships to the nearby pier to attract visitors and generate revenue. Finally, the addendum noted the Museum would serve different kinds of visitors in different seasons. The addendum concluded by reiterating the parking and support space concerns outlined in 2014.



2020 Update

In May 2020, the USCG and NCGMA updated the 2017 Preliminary MIP (Exhibit A) to better align the NCGM with other national military museums. The 2020 MIP (Exhibit B) also describes updated approaches to the visitor experience with a significant shift in focus to immersive history exhibits. The 2020 MIP prioritizes serving the general public, then education groups, and then current and former members of the USCG. This is an evolution from the SMP which focused more on current and former service members and education groups, and the 2014 and 2017 addenda which focused more on regional visitors and education groups.

The Feature Theater

While a 170-seat theater is included in the current building plans, the USCG no longer plans to develop a signature film (described as a “wide-screen with a dramatic portrayal of the dedication, service, power, and honor of the Coast Guard”) originally budgeted at \$4.0M. A less ambitious, but still emotionally charged orientation film is currently planned.

STEM Center

The concept of the STEM Center remains on the current architectural plans, but the space for these programs was reduced from 4,600 SF to approximately 2,000 SF (see Chapter 20), potentially limiting the scope and nature of STEM programs as outlined in the 2017 Addendum. The STEM Center and the proposed Early Learning Center will also be able to share the multipurpose event space on the same level. Detailed program plans for the center have yet to be developed.

If the STEM Center is planned as a source of earned revenue (a “Margin of Excellence” program), it will need a business and management plan with projected revenue sources and with staffing and other operating costs identified. If the planned qualifications program is also to be considered as a revenue center, it will need similar operational planning and concept development.

The source of the capital funds and management structures for the center’s experiences are currently the subject of discussion between the USCG and the NCGMA.

Early Learning Center

Space for the Early Learning Center concept was included in the 2017 space program but was not included in the current architectural plans (see Chapter 20). During the day, the south end of the Event Center space will be used as the Early Learning Center and other multi-use spaces will also be available, if needed. It may be possible to use spaces designated for the STEM Center for Early Learning programs as well, at times when the spaces are not otherwise in use.

Paid and Unpaid Programs

The operations and costs of both paid and unpaid museum programming will depend on the specifics of the programs being presented at the Museum. These programs have not yet been fully defined. Programs related to the Museum’s mission could include the following:

- Educational programs for school groups focusing on water safety, environmental science, and historical topics ranging from the founding of the nation to the War in Vietnam.
- Miniature model building, highlighting models in the USCG Collection.
- Youth leadership development programs, including a teen employment program.
- A maritime lecture series for adults with historical and environmental themes.
- Virtual classroom visits with current enlisted USCG members.
- Film festival featuring films related to the water, boats, and the USCG.
- Discovery carts in the exhibit areas with interpretive staff support.
- A Leadership training program for corporate leaders using USCG’s approach for conducting operations such as rescues.
- Water safety programs, including life jacket fittings, rescue demonstrations, and more.
- Programs on sustainable seafood, including cooking classes or demonstrations.
- Interactive ship inspection demonstrations, showing how the USCG makes sure boats are safe and carrying appropriate cargo.

- “On this day in USCG history” board capturing a wide range of events and moments in the USCG's history.
- Hurricane or flood preparedness classes to help citizens be better prepared for disaster.
- Develop cooperative agreements with New London community organizations to offer programs reflecting the community’s needs and interests, especially during the winter season.
- Battle of the Bands featuring the USCG band and other regional talent.
- Ask a Veteran: Q and A with former service members involved in significant events like response to 9-11, Hurricane Katrina, etc.
- Interactions with the *Eagle* when it is in its new homeport.



Typically, these types of programs are developed and operated by education or public program staff with few direct costs other than staffing. Staffing costs are provided with the overall staffing plan provided in Chapter 23. During the pre-opening staff ramp up, all programs under consideration will be part of a thorough vetting and evaluation to ensure they are viable in terms of mission, logistics, staffing, cost, feasibility, risk, liability, etc.

Event Center

The proposed Event Center remains a significant space in the building design, occupying much of the top level of the Museum. The potential for this space to earn “Margin of Excellence” revenue remains strong. That potential will be verified in a business plan to be developed by the NCGMA working with a museum catering and event planning consultant.

Support Facilities

The need for support areas remains, including staff offices and behind the scenes areas that were identified as challenges in the 2014 and 2017 updates. This is a significant issue remains unresolved.

Parking and Bus-Drop Off Access

NCGM Staff Parking: Parking for the NCGM staff will be accommodated at the New London City Parking Garage located across the street from Union Station.

NCGM Visitor Parking: Parking for the Museum's projected visitors will be accommodated within the New London City Parking Garage's proposed 400-space expansion. This expansion was first proposed in 2017 and has been consistently passed over for funding. As of the 2020 update, the City has not secured funding for the project. In addition, there is competition for summer weekend parking with the Cross Sound Ferry's Block Island day trip services that will impact NCGM visitor parking.

NCGM Visitor Bus Drop-Off: Visitor bus drop-off will be accommodated in front of Union Station. Passengers will then utilize the new pedestrian bridge to walk to the NCGM.

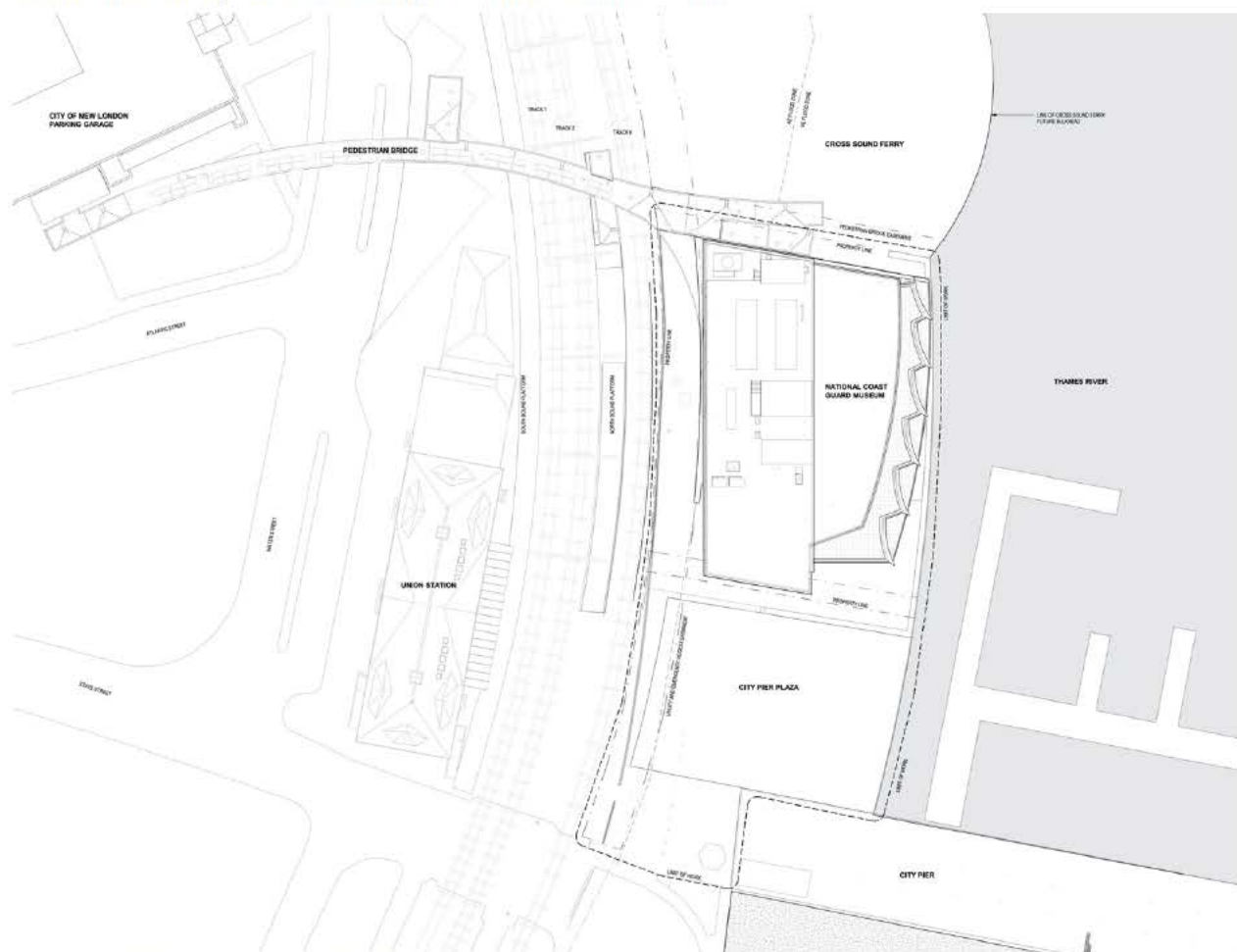


Figure 4. NCGM Architectural Site Plan
Source: NCGM Construction Documents, 2019

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CHAPTER 7: DEVELOPMENT OF A VISITOR EXPERIENCE

2008 Strategic Master Plan Summary

Visitor Experience Goals

The SMP provided an overview of the exhibit components of the visitor experience, designed to reflect the key values heard during interviews with stakeholders. Stakeholders preferred that the Museum focus on telling the Coast Guard story rather than engaging in interactive experiences or in “facilitated conversations.” This was reflected in the SMP’s emphasis on historical galleries over science-oriented exhibits. Overall, exhibits were intended to be “challenging,” to promote visitor learning and reflection on the USCG. The exhibits concepts presented were intended as starting points for a comprehensive exhibit design process which would occur closer to the Museum’s opening.

Museum Exhibits

The exhibits spaces were divided into two major areas:

- Legacy Galleries (10,000 SF) which would depict the USCG’s history
- Today/Tomorrow Galleries (6,000 SF) which would tell the story of the USCG’s present and future through highly interactive, family-oriented exhibits

For both areas, the SMP recommended using appropriate collection items from the USCG historical and art collections, along with recent USCG equipment. The SMP noted USCG collections were receiving inadequate care, which must be remedied not only for the sake of the Museum, but also to preserve the service’s history. The SMP also provided several recommendations for improving collections care and management.

Theaters, Interactive Experience and Related Building Requirements

In addition to these galleries, the SMP proposed an Introductory Theatre, a Court of Honor that could be used for special events and function rentals, an Art Gallery (1,000 SF), and CG Live! (1,200 SF; envisioned as a space where the public could see actual USCG missions in real time and interact with current USCG members). This approach was designed to use the SMP’s concept of “the Delta Museum Approach,” which called for designing and building the Museum such that exhibits and other elements would be easily changeable, especially for the Today/Tomorrow Galleries and for interactive elements.

The SMP also specified architectural considerations related to loading, lighting (natural and artificial), entrances/exits, and other mechanical details particular to museums. This approach was intended to make future changes for exhibits and theatre shows more economical, noting that museums typically have an easier time funding capital costs than operating expenses. Still, the SMP noted that exhibit rotation and maintenance would be expensive, and provided recommendations introducing cost savings. The chapter concluded by recommending a timeframe for engaging an exhibit designer closer to the Museum’s projected opening date.

2014 Addendum

This chapter was not updated in 2014.

2017 Addendum

Overview of Changes to the Visitor Experience

This addendum branched the visitor experience into two main components:

- The visitor experience (free) and operated by the USCG
- The “margin of excellence” spaces (fee-based) operated by the NCGMA

The exhibit concepts and objectives did not change from those outlined in the SMP but additional information was added in the 2017 Addendum. Notable areas of additional detail include the STEM Center concept, the Museum’s role as an ambassador for the USCG, and a clearer articulation of the Museum’s themes, “Lifesavers Around the Globe, Champions of Commerce, Stewards of the Environment, Enforcers on the Seas, Defenders of our Nation,” and “Semper Paratus.”

Museum Exhibits

The addendum placed more emphasis on families and interactive elements, with dedicated sections on “social learning,” “embedded toddler activities,” and STEM integration throughout the exhibit areas.

At the same time, the addendum placed an emphasis on artifacts, and divided these into five categories:

- Category A: Artifacts requiring strict control of light, temperature, and humidity
- Category B: Artifacts that can be housed in typical office conditions
- Category C: Artifacts installed outdoors without additional protection
- Category D: Artifacts housed in non-climate controlled, off-site, warehouse space
- Category E: Consumable educational artifacts

The addendum continued to recommend using museum evaluation techniques throughout the lifecycle of an exhibit to improve their effectiveness.

Cost to Design and Build Museum Exhibits

The addendum provided a construction cost estimate of \$513 to \$656 per SF for the exhibit areas, which was in line with 2017 industry norms. It also noted that it might be challenging to manage the “boundaries” of constructing and operating the visitor experience because the USCG is responsible for the overall visitor experience, but the NCGMA is responsible for operating fee-based visitor experiences and programs.

The addendum also described the same considerations for controlling costs for exhibit design and highlighting critical aspects of building design presented in the SMP. Notably, the addendum called for a visitor experience team or museum planner to work closely with the architect to be sure that the Museum’s operating needs would be fully addressed in the building design.

2020 Update

Chapter Overview

While many of the broad concepts outlined in Chapter 7 of the 2017 Addendum still hold true, the ideas and approaches outlined there have largely been replaced by the subsequent planning work undertaken by the USCG and the NCGMA. Many of the key concepts are still valid but are no longer providing overall direction to the exhibit design process. As of fall 2020, the USCG's NCGM exhibit design has progressed to a 50% design development level of completion.

Exhibit Program and Design Development Evolution

The 2017 Preliminary MIP (Exhibit A) identified specific ways the concepts outlined by the 2017 Addendum could be developed to provide a better foundation for the exhibit design process. The 2017 Preliminary MIP also outlined key interpretive themes and visitor takeaways and defined the Museum as a significant attraction that would draw national and international visitors.

With funding available in 2018, the USCG commenced with the exhibit design process. Based on guidance from the 2017 Addendum, the 2017 Preliminary MIP, and other documentation, the exhibit design firm produced a design direction that called for highly interactive exhibits with only a small number of sensitive collection items on display ("Category A" artifacts).

In March 2020, the 2017 Preliminary MIP and the MEI reports became a foundation for an updated master interpretive plan designed to guide exhibit development. The updated document, the 2020 MIP dated March 31, 2020 (Exhibit B), was developed by the USCG team with the cooperation of the NCGMA. The 2020 MIP places a stronger emphasis on using other national military museums as models including the National Museum of the Marine Corps and the National World War II Museum. The 2020 MIP also serves as the foundation for the exhibit design development currently underway with an emphasis on artifact-rich and historically immersive exhibit techniques.

Exhibit Design Approval and Potential Cost Implications

Exhibit design is currently underway with an anticipated USCG approval after delivery of this 2020 Update. Associated cost estimates of updated costs for exhibit design, fabrication, and installation are reflected in Chapter 26 of this addendum.

Paid and Unpaid Programs

The operations and costs of both paid and unpaid museum programming will depend on the specifics of the programs being presented at the Museum. Programs presented by the Museum or the NCGMA have not been clearly defined as of yet. Typically, these types of programs are developed and operated by education or public program staff with few direct costs other than staffing. Staffing costs will be provided within the overall staffing plan provided in Chapter 23.

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CHAPTER 8: THEATER PROGRAMS

2008 Strategic Master Plan Summary

Theater programs, encompassing orientation films, signature films, simulators, and gallery demonstrations (“Object Theaters”), would support the Museum experience by offering another way for visitors to engage with the story of the USCG.

Theaters

As proposed, the Museum would operate two theaters. The first theater, the feature theatre, would present a short format (20 to 40 minutes) signature film about the USCG in wide-screen and/or 3D format for a modest fee. (Giant Screen or IMAX was deemed inappropriate for the region for financial reasons). This theater would seat approximately 150 in “luxuriously comfortable” stadium seating. The front of the theater would have a flexible design that would allow easy conversion for other uses during non-open hours such as lectures, meetings/panels, and even performances from small musical ensembles. These uses would potentially generate additional revenue. The SMP also detailed operational considerations, including the need for a lobby, managing cleaning and distribution of 3D glasses if 3D films were shown, and the possibility of sharing maritime films with other regional museums or jointly developing films.

The second theater, the introductory theater, would offer a free, 10–12-minute orientation film about the USCG. This space could be used to support other function rentals using the adjacent Court of Honor.

Simulation Center

The Simulation Center would provide an immersive, 4D experience during which visitors would experience the challenges of an ocean rescue operation. The SMP recommended a partnership with a vendor who would design the experience, including hardware, and then operate the simulator, splitting profits with the Museum. This type of profit sharing is typical for simulators in museums and science centers. The SMP recommended developing a Request For Proposal to find a commercial partner to develop and operate the simulation center as an appropriate next step.

Object Theaters

Finally, the planning firm proposed “object theaters,” a method of interpretation common to science centers where a demonstrator shows an object, phenomena, or process via a demonstration within the gallery. These free experiences would draw the visitor deeper into the Museum’s story and promote learning.

2014 Addendum

This chapter was not updated in 2014.

2017 Addendum

This chapter was not updated in 2017.

2020 Update

The role theaters and simulators play in the Museum program has changed significantly since the SMP was originally developed in 2008. As currently designed, the NCGM has one theater, a greatly reduced simulation program, and it remains unclear if Object Theater experiences will be accommodated.

Theater Programming

The NCGM Theater is designed to accommodate 170 seats and combines the functions of the feature theater and the orientation theater. The theater will show a free, introductory orientation film during the day. The theater may offer paid experiences to generate revenue after hours, but it is no longer seen as a significant source of earned revenue. The Theater also provides an exceptional venue to increase the USCG's capability to showcase itself through scheduled speaking events, on the international, national, and regional level.

STEM Center (formerly Simulation Center and Object Theater)

The current plan for the area now identified as the STEM Center (August 2020) envisions visitors moving through three rooms as a part of one experience. According to current drawings, this design would allow for 16 participants at a time in each of the three spaces, for a total of 48 participants in the center at one time. Details as to the specifics of the content/programming and the sources of funding for the design and development of the center, and how much, if any, net revenue it will generate are still under discussion. If it is determined the space is to be designed as a revenue generating program, the center will be operated by the NCGMA or another partner.

Similarly, it is uncertain if “Object Theater” experiences will be incorporated into the exhibit area as the exhibit design development is not yet complete. At present, Object Theaters do not appear to be part of the current concepts.

Staffing and Revenue

The potential impact of the Theater and STEM Center on staffing and revenue is discussed in Chapters 16, 17, and 23.

CHAPTER 9: EDUCATIONAL PROGRAMS

2008 Strategic Master Plan Summary

Chapter 9 describes educational activities taking place within the parts of the building designated as the Learning Center and also within the exhibit areas.

Physical Spaces

The chapter first identified the physical spaces needed for educational programs, which included the “Commons,” a multi-purpose, tech-equipped space to serve as a space for group orientation, a lunch area for student groups, a place for community events, and as a rental space for corporate functions. Within the building layout, it would serve as the bridge between the public exhibits and two “program labs.” The labs would accommodate 35 people each and contain specialized equipment that would allow deeper engagement. The type of equipment would be determined at a later date based on the needs of teachers, scout groups and camps, and adult education participants.

Museum Programs

The SMP identified four categories of activities that would either support or take place in the Learning Center: People-to-People Programs, School Programs, Public Programs, and Enterprise Programs.

People-to-People Programs describes programs or interactions with individuals representing the Museum, most of whom would be volunteers. The majority of volunteers, many of them former USCG personnel or USCG aficionados, would serve as “floor explainers,” offering more information and demonstrations within the exhibits for the general public and school groups. Other volunteers would serve as advisors for special projects. Student interns would fill other unspecified roles. The SMP noted that successful volunteer programs require significant and ongoing investment from the Museum to provide training and support to be successful.

Volunteers would also assist with school programs. Free of charge, the Museum would offer teaching materials to teachers, orientation at the Museum, time in the exhibits, and a space to eat lunch. For an additional fee, schools could add specialized lab experiences in the Learning Center. Notably, the fee for these programs was intended to help cover costs, not generate revenue.

Little detail is given for public programs outside of the exhibit experience. Enterprise (fee-based) programs are described as a future possibility.

Revenue Generating Programs

The SMP also stated that the NCGMA could develop revenue generating programs using the Learning Center. The plan did not factor these into the budget, but suggested programs like birthday party rentals, homeschool programs, camp-ins and school vacation programs, and adult programs including lectures series and travel opportunities ranging from day-long field trips to international adventures.

2014 Addendum Summary

This chapter was not updated in 2014 because the learning center concept was eliminated when the Museum moved to the waterfront site.

2017 Addendum Summary

This chapter was not updated in 2017 because the Learning Center concept was eliminated when the Museum moved to the waterfront site.

2020 Update

Evolution of the Learning Center

The central idea of an area of the Museum dedicated to education has remained important since 2008. Since then, the concept of a Learning Center has evolved into the “STEM Center,” an idea proposed as part of the MEI (Exhibits C and D). Planning for the MEI began in 2017 at the conclusion of the MEAP’s work (see chapter 7).

NCGMA Museum Education Initiative – Student Experience

The MEI development process had representatives from the USCG and the NCGMA, as well as other stakeholders including a wide range of local and regional teachers and education experts. As articulated by the MEI, the student experience of the Museum would be permeated by a sense of discovery created by multi-sensory, hands-on/interactive learning elements and also integrate a wide range of subjects include science, math, technology, engineering, reasoning, teamwork, and leadership, among other skills.

The MEI outlined three main aspects of the student experience:

- The Virtual Shipmate Program: Introduced students to current and historical members of the USCG representing a range of backgrounds, duties, and experiences.
- The Individual Qualification Program: Offered individuals ages eight to adult the opportunity to complete interactive activities within the exhibits to develop mastery of a set of skills leading to a particular Coast Guard operational specialty such as aviator.
- Group Education Programs: Focused on student groups that would participate in simulations of common USCG operations, such as an open ocean rescue, to hone their reasoning, teamwork, and STEM skills.

In addition to the simulation center, “exploration laboratories” for non-digital hands-on experiences were also planned.

The second phase of the MEI provided guidance for pre-school and adult audiences. An Early Learning Center would introduce preschoolers to the character of the USCG and STEM based concepts. Adults would be invited to engage with the Museum beyond the exhibits through lectures and similar events and through workshops on leadership and professional development.

MEI Recommendations and the 2020 Museum Interpretive Plan

The 2020 MIP (Exhibit B) incorporated some of the MEI educational recommendations (Exhibits C and D) into its interpretive concepts for the exhibits. The USCG and the NCGMA are in active discussions about the role and function of education programs as the Museum has evolved. Aspects of the programs under discussion include the Qualification Program, the role of the STEM Center, and programs for both early learners and adults. The MEI remains an important reference document for the Museum's future programs and as a vital tool in the NCGMA's fundraising efforts.

While the USCG sees serving general visitors and the USCG community as their first priority, they also recognize that serving regional students is important as well, as the MEI made clear. That report outlined four distinct components for the proposed STEM Center:

- 1) Interactive learning Center
- 2) Exploration Laboratories
- 3) Simulation Gaming Center
- 4) Rescue Coordination Center

Collectively, these components can provide for compelling learning experiences. However, the current Museum design cannot accommodate dedicated individual spaces for each of these components. With creative planning, technology integration, and flexible multipurpose spaces, the plan could be adapted to create meaningful experiences.

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CHAPTER 10: INFORMATION TECHNOLOGIES AND VIRTUAL ENGAGEMENT

2008 Strategic Master Plan Summary

Operational IT Needs

The SMP stated that the primary IT function at the Museum would be supporting the administrative needs of the Museum, including databases for both collections and memberships. These recommendations were based on the assumption that technological needs were changing quickly, so it was more important to decide what function the IT system would have than to determine the exact equipment that was needed. Indeed, the SMP recommended that the building be designed to be compatible with coaxial cable, fiber optic, and wireless networks, since one or more of those technologies could be obsolete by the time the building was built. Given the speed of technological changes, the SMP recommended developing specific IT plans at a later date, and to only purchase equipment at the last possible point before opening.

Building Relationships with Technology

The most important public-facing function of IT was broad - to build relationships with the Museum's audience. This could be accomplished both on-and off-site through a relationship model. On-site, visitors would be able to send home the results of their experiences at exhibit workstations. The goal was to have the connection to the Museum continue on the Museum's website, which would facilitate an ongoing relationship with visitors by making it easy for them to visit the Museum and promoting attractions that would make them return. To this end, the website would be a place for purchasing tickets, finding directions, and getting more information about what experiences the Museum could offer.

2014 Addendum Summary

The 2014 Addendum did not alter any of the 2008 plans but responded to changes in technology and the development of social media.

The Emerging World of Social Media

In the intervening years, more museums had been engaging with visitors over social media, and the addendum recommended that the Museum do the same. To that end, the addendum added staff and expenses into their budget to compensate for more online interaction with visitors. Aside from maintaining a presence on social media sites, the Museum would also be able to utilize crowdsourcing and crowdfunding as new ways to interact with visitors and build potential fundraising networks.

The Guardsman Honor Roll

Aside from social media, the addendum also recommended that the NCGM use activities on the website to build relationships with visitors. The addendum pointed to the proposed Coast Guardsman Honor Roll and History

Center as a potential vehicle for both funding and relationship building. Users would be able to post their stories and feel connected to past and future generations. All users could search the database for free, but if they wanted to enter data, maintain a record, or print out records, there would be a small fee, which could be a source of earned revenue.

2017 Addendum Summary

This chapter was not updated in 2017.

2020 Update

Technology continues to evolve at a rate that makes planning three or four years out challenging. However, USCG or the NCGMA could begin to develop a virtual Museum with online collection access, STEM-based learning activities, and a strong social media presence in anticipation of the Museum's opening.

The current pandemic has inspired existing museums to reach out to their fans and supporters online in a multitude of creative ways. A similarly strong virtual program for the Museum could help shape the stories the Museum tells and inspire support for the project.

The outreach potential for virtual programming is remarkable. Where 50 people might have come to a museum program before, now the same virtual program can easily draw 500 with the same amount of effort. While virtual programs will extend the museum's reach, In a physical sense, not much will change. Museums are fundamentally places about the real thing, or the real experience. Physicality is, and will remain, very much at the heart of what museum do.

CHAPTER 11: COLLECTIONS

2008 Strategic Master Plan Summary

The SMP identified the chief collections goals as increased public exhibition of objects in the Coast Guard collections and the safety of those objects. There were several ways that public exhibition could be achieved: online records, themed public spaces, and “icon” objects throughout the Museum. Much of the chapter was concerned with the safety of the objects in the Museum’s collection. The chapter provided material on museum industry best practices in Record-keeping, Acquisitions, Deaccessions, Loans, Handling, Conservation, and Collections Access.

Icon Object

An object that would draw visitors to the Museum, such as the Katrina Axe.

Divided Collections and Missing Policies

One challenge for the Coast Guard was the divided nature of the collection. The New London, Connecticut and the Forestville, Maryland collection storage locations each had their own database, so there would need to be a massive data transfer in order to have one data set of all Coast Guard object records. Another major problem was that in areas like Acquisitions, Deaccessions, and Loans, the Coast Guard’s policies often consisted of unwritten procedures, rather than written policies. The report recommended codifying those policies in writing as soon as possible.

Collection Storage Options

The SMP analyzed the available object storage options and found them severely lacking. The Forestville storage facility was the largest, but even at 13,000 SF was too small for the collection. In addition, most of the space was not climate controlled. While the New London storage space was climate controlled, it was already at capacity. The SMP recommended that the NCGMA plans include space for on-site storage, and that the permanent home for all of the Coast Guard artifact collection should be in Connecticut.

Despite this recommendation, the SMP did not recommend moving the collection immediately. The collections materials were still in the process of being catalogued, and to move the objects before more of the documentation was complete would pose a risk to the collection. In addition, the budget only provided enough space for the New London collection, not the Forestville collection, and did not provide enough staff for such a large move.

The SMP suggested that since the collection belonged to the Coast Guard, the money to move it and improve the storage conditions should come from the Coast Guard’s budget, not the NCGMA’s. Even with that plan, the Museum would still not have enough infrastructure to take over such a large collection. The plan suggested that while the Museum was the right home for the collection, it might not be able to take over the caretaker’s role until well after it was open, and that the project of cataloging and moving the collection should take place independently from the formation of the Museum.

2014 Addendum Summary

The major change from 2008 to 2014 was the elimination of the Collections Center in the plans for the Museum. There would not be enough room at the new site for collections storage, and the planned move of collections from the CGA to the Museum was abandoned. The 2014 Addendum recommended that the Museum not take on any additional collections storage or stewardship roles until after the Museum was open and established.

This addendum also made recommendations as to how the new Museum site could be used for collections storage in the future. Since there were no windows on the wall next to the ferry terminal, the plan suggested enclosing the area and turning it into collections storage. In addition, the NCGMA reported that there could be room for showing collections on the first floor since it would be built on a plinth over the flood plain.

2017 Addendum Summary

This 2017 Addendum reflects a significant change in the Coast Guard's collection. The whole collection (while still in several locations) was now managed centrally by the Historian's Office. As a result, there had been significant gains in the number of objects that were catalogued.

Since the collection was still in two parts, each location would have a different role as the Museum came to fruition. The update outlined a plan where, during the planning/construction years of the NCGM, the current CGA museum would reorganize itself to focus on CGA needs. Both the CGA museum and the Forestville collection storage center would separate objects needed for the NCGM. Once the NCGM was open and operations stabilized, the Forestville collection storage center and the NCGM would investigate moving all of the Coast Guard's collections storage to one location.

The addendum noted that while the current architectural program and staff list included collections areas and a collections manager, that did not guarantee that the final Museum would include space for collections or curatorial personnel. The plan pointed out that the NCGM would not be able to take over stewardship of the Coast Guard's collection when it opened. Given this situation, the plan defined the Museum's future role with regard to collections not as a steward, but as "the recipient of long-term location assignments of collections objects."

2020 Update

The construction documents for the Museum do not include space for storage of collections and do not include curatorial or collections workspaces. While the 2017 Addendum does include provision for offsite areas for staff offices, museum store storage, general storage, and collections storage, spaces for these functions have not yet been designed or located.

Recommendations

The Coast Guard should continue to create a plan for long-term care of the Coast Guard's collections that includes work and storage spaces with appropriate museum-quality conditions, ideally as part of or near the Museum.

CHAPTER 12: MARKET ASSESSMENT

2008 Strategic Master Plan Summary

The SMP evaluated the existing market for the NCGM and identified important market segments. Overall, the SMP found that there were more opportunities than challenges when it came to the site choice. New London was a strategic location for the Museum and the proposed sites were in walking distance of Fort Trumbull State Park, which allowed for water access and use of existing infrastructure. Fort Trumbull brought challenges as well, since memory of the eminent domain conflict in the area was still fresh.

One major opportunity cited by the SMP was the demographics of Connecticut, which was first in the nation in terms of household income, as well as in standardized testing in several disciplines. Connecticut had also formed a maritime industry cluster trade organization in 2000. However, Connecticut also had an aging population, and growth in the workforce and population was slow or static. Though Connecticut had increased its tourism marketing between 1993 and 2004, they were still ranked 40th in the US in that spending category. During the same period, revenue from hotels declined and there were fewer jobs in the tourism industry and there was an increase in shorter leisure trips, a market more dictated by baby boomers. The SMP considered both of those trends as promising for the Museum.

The SMP's assessment of the City of New London was more mixed. On average, New London residents were less wealthy and less educated than others in their state. However, it had a younger and more diverse population. In the 1990s, New London was described as "a struggling community and economically depressed" and between 1985 and 2005 violent crime had increased. This could deter tourism in the City and hamper the Museum's ability to hold evening events.

The SMP saw signs that the situation was changing, with increased traffic to the downtown area including hundreds of newly developed housing units. It also anticipated that positive change would continue based on new projects in the works, such as the development of a Maritime Heritage Park, expansion of existing local workforces for large companies like Electric Boat and Pfizer, and a planned increase in ferry service.

Market Segments

When it came to analyzing audience potential, the SMP focused on populations present in the New London area, specifically four market segments: Residents, School Children, Tourists, and Coast Guard personnel.

- **Resident Market:** focused on populations within a 45-minute drive of New London, with a secondary focus on those within a 70-minute drive. Though Fairfield County (one of the wealthiest counties in the country) skewed the data, the report found that the wealth, education, and age of the residents made them a promising market for the Museum.

- **School Market:** defined as populations within 60 miles of New London and was considered a harder market for the Museum to attract, given the competition from other museums and sites in the area.
- **Tourism Market:** more difficult for the report to predict, since there was no tourism data for overnight tourists, but studies that included both day trippers and overnight tourists indicated an annual visitation of between 9.5 and 11 million for the state.
- **Coast Guard Market** (current and former service members and supporters): identified as having potential because the national reach of the Museum could attract members of the Coast Guard community from other areas of the country.

Overall, the total potential market for the Museum was estimated to be almost 8.9 million potential visitors and it was recommended that the Museum use 210,000 visitors as its estimate for a stable year attendance.

2014 Addendum Summary

Changes in the New London Market

In the 2014 Addendum Chapters 12 and 14 of the SMP were combined into one chapter. In terms of the market assessment for New London, the addendum noted that some of the changes forecasted in the SMP had come to pass.

- The City had completed several major building projects and more downtown buildings were being renovated and occupied.
- Several new schools were constructed, and more restaurants opened.
- Vacancies in retail spaces were still a problem, as was violent crime in the area. The rate of violent crime in New London was more than twice the national average. Even though most of the crime took place at night when the Museum would be closed, it would negatively affect the perception of safety around the Museum and probably deter attendance at evening events.

Evolving Market Segments

In this update, the addendum focused more on the tourist audience, and added two new profiles to the Defined Market Segments of the SMP: Ferry Passengers and Cruise Passengers. New London had announced plans for a new ferry terminal near the new waterfront site. The existing terminal served 1.3 million passengers annually. The cruise ship business in New London was declining. In 2007 there were 7,000 passengers annually, but by 2011 there were none. However, two ships were expected to stop in New London in 2014, which could mark a return of this potential audience.

The addendum noted little to no change in the Resident, Tourist, or Coast Guard Personnel segments. Because of the emphasis on tourists and the low budget for travel at many schools, the addendum eliminated two counties from the school audience, decreasing the potential number of visitors.

Museum Attendance Projections

Since the Museum was still in a preliminary planning stage, the report projected an attendance range of 184,000 to 440,000 with the higher end of the range 100,000 more than in the previous report. One major reason was the change in the site of the Museum to one that would be friendlier to foot traffic.

However, the addendum made it clear that its attendance estimates rested on the assumption that there would be sufficient parking for Museum visitors during the peak season.

Other factors included: a larger resident population, the continued development of downtown New London, and more monetary investment from Connecticut to promote tourism. In terms of the school audience, competition from other established museums in the area for field trips continued to be a significant concern.

2017 Addendum Summary

New London Market

When looking at the New London market, the 2017 Addendum noted the continued trend of positive change since 2014. The development of New London's downtown had continued, and violent crime had been on a downward trend. There were also some changes that had yet to come to fruition, such as the expansion of the Water Street Garage and a predicted 5,000-person population increase. A significant challenge was that Connecticut's marketing budget for tourism had declined since 2014 and was expected to decline further in the future. Nonetheless, visitation in Connecticut had been increasing overall, possibly because once the budgets were cut, the Office of Tourism switched to cheaper digital advertising, which turned out to be more effective.

The parking challenge had also grown since its mention in the 2014 Addendum. The 2017 Addendum noted that planned developments like the Water Street Garage expansion were important to ensure that there would be enough parking for visitors. The plan cautioned that without development of the garage, there would be a significant problem with visitor parking during the summer.

Attracting both Tourists and Residents

Some of the important updates can be seen in the assumptions and goals that drive this chapter's analysis. The conclusions of the chapter's marketing analysis are based on a scenario where there is both a new ferry terminal and a new pedestrian bridge to be used by visitors. Therefore, the Museum will mostly serve tourists and ferry passengers during the summer peak period. The converse is that during the winter, the Museum would be expected to appeal to residents, informing another assumption: that the exhibits will be appealing both to tourists and to residents.

Museum Attendance Projections and Potential Challenges

This chapter raised the attendance estimates to a range of 270,000 to 418,000 with increasing emphasis on the tourist audience. This projection increased for a variety of reasons, including the improvements to downtown New London, the projected expansion of the Water Street Garage, the larger population of New London, and the increase in number of ferry passengers. The 2017 Addendum also increased the potential attendance because of additions to the Museum plans that made it more appealing to children, like the STEM Center. Although some of the attendance estimates had shifted, there was little to no change in the makeup of those

segments, with the exception of the Cruise Ship Passengers. Since cruise ships were no longer coming to New London, the cruise ship segment was eliminated. The primary audiences in 2017 would remain local residents, tourists, school groups, and ferry passengers.

The addendum also highlighted some of the factors that could negatively impact attendance:

- **Single Entrance and Long Lines:** Since the Museum had only one entrance, there might be a long line during the peak summer season. Ferry audiences and caregivers could be deterred by not being able to bring their suitcases or strollers respectively into the galleries.
- **Student Market:** Additionally, the addendum anticipated funding challenges in getting student groups to travel longer distances for field trips. In its Attendance Potential Scenarios, the SMP expanded on the reasons why it estimated that the Museum could expect to receive below average numbers of students: there was limited program space in the Museum and there was significant competition with other more established education programs.
- **Resident Market:** The same scenario section noted that the resident market could also be expected to be below average since New London is a smaller city, and its media market doesn't reach many other residents of the SMP's 75-mile Secondary Market radius.

Overall, the benefits of the new design, access to the ferry, and an improved downtown outweighed the challenges, and the 2017 Addendum recommended that the Museum use 292,000 visitors as its estimate for a stable year attendance.

2020 Update

New London

Since 2017, New London's growth has been more stagnant. The City has made some progress in creating more parking spaces but has not funded or completed the Water Street Garage, an expansion that is critical to providing parking for Museum visitors. While the pedestrian bridge has a conditional approval of plans, local use approval, and state funding has been set-aside, funding has not yet been released to begin construction.

The 2017 Addendum predicted population growth in New London of 5,000 people, but in the years since the report the population has instead slightly declined. Likewise, the population of K-12 students has dropped in the past decade. In a more promising trend, both violent and non-violent crime have decreased steadily over the past four years.

Year	Violent Crime	Property Crime
2016	193	743
2017	132	741
2018	122	741
2019	79	461

Table 2. Connecticut Crime Statistics
Source: Crime in the US 2016-2019, FBI

The trend toward less spending on tourism marketing that the 2017 Addendum noted has also continued. The \$4.1 million budget in Connecticut's Tourism Marketing Fund in 2018 was increased to just \$4.3 million dollars in 2019. In FY2018 Connecticut spent less than any other state in New England, with Maine budgeting \$12 million

and Massachusetts \$10 million. The Connecticut Office of Tourism estimated that with their budget they could only reach 10% of their target audience.

Even with less spending on tourism marketing, there has been growth in visitor spending in Connecticut. The most recent report on Economic Impact of Tourism in Connecticut in 2017 shows overall spending increasing by 2.3% from 2013-2017. However, the only area of spending that decreased over

Year	2013	2014	2015	2016	2017	2017 Growth
Recreation Spending (nominal dollars, millions)	\$2,813.7	\$2,697.4	\$2,684.5	\$2,653.6	\$2,722.1	2.6%

Table 3. State of Connecticut Recreation Spending
Source: Economic Impact of Tourism in Connecticut, 2017

that time was spending on recreation, the category of spending that Museum visitation would fall into (others are transportation, lodging, retail, and food & beverages). Recreation spending dropped after 2013 and then began to climb again, resulting in a net decrease of 0.7%. Even with that slight decrease, recreation remains the largest visitor block of spending in Connecticut, with \$2.7 billion spent in 2017. The NCGM is a free museum but looking at recreation spending is a good indicator of what sectors potential visitors are interested in when they come to Connecticut.

Unlike prior studies, the 2017 study did not collect detailed county by county data; therefore, a more detailed update specific to the New London region is not possible.

Parking

In 2017, the City of New London contracted with Milone & MacBroom to complete a study on the parking needs and opportunities in the City. The study concluded that there were opportunities for business growth, but that the City needed significant changes to its parking facilities. The City set the goal of more than doubling its 1,696 spaces to 4,000 spaces by 2022. One of the most ambitious projects recommended by the report was for a 400-space addition to the Water Street Garage. This addition would have a significant positive impact on parking at the NCGM, since it is the closest parking structure to the Museum.

In 2017, the Addendum parking report was based largely on the conclusions of the Milone & MacBroom study. This report outlined the chief concern: that on the busiest days (summer weekends) the demand for Museum parking would require 99% - 133% of the spaces that were available. This deficit of 800-850 spaces led the planners to conclude that there were significant issues with parking for the NCGM. However, the 2017 Addendum noted that if the City implemented the changes suggested by the study, parking issues could be resolved.

2017 - 2020 in New London Parking

There has been relatively little progress toward adding parking downtown in the intervening years, and it is unlikely that there will be much more progress in time for there to be a viable number of parking spaces for the NCGM. New London has not commissioned an updated parking study since the Milone & MacBroom report was released. The following data is drawn from conversations with City officials.

- **Overall Parking Progress:** The City of New London has increased its overall number of parking spaces by 2,500, but it is not on track to meet its goal to add 4,000 spaces by 2022. The timeline to add these spaces has been pushed back by at least one or two years. However, that one to two year timetable is not solid, especially since there is no clear delivery date for the Water Street Garage expansion, which makes up about 25% of the spaces yet to be created and is critical to the success of the NCGM.
- **The Pedestrian Bridge:** One major project tied to the parking needs at the NCGM is the pedestrian bridge that would connect the ferry terminal and the NCGM to the Water Street Garage. The funding for the bridge will be released as prescribed by the State of Connecticut Department of Economic and Community Development Commissioner.
- **The Water Street Garage:** The Milone & MacBroom study recommended that the Water Street Garage add 400 spaces. Since then, the City has applied for grants to fund the approximately \$25M project. In the three years since that report, the project has not been funded, perhaps because of its comparatively high costs. A 2019 analysis by the firm WGI reported that the average cost per structured parking space in the U.S is \$21,500, but the cost per space in the Water Street Garage would be \$62,000. At that cost, the project does not appear likely to be funded in the near future. Without the expansion, the garage remains unprepared to handle the Museum's parking needs. A 2018 bid for construction at the garage states that from May-September (the Museum's peak times), the garage is already at 95% capacity under current conditions.
- **Ferry Parking Needs:** Two ferries operate out of the ferry terminal, the Cross Sound Ferry, an automobile ferry that operates between New London and Long Island's east end, and the Block Island Ferry, a passenger-only ferry that operates between New London and Block Island May through October. The Cross Sound Ferry needs little parking as most users drive aboard the ferry. The Block Island Ferry, however, has the same peak user days as the Museum, weekends from May through October. As a passenger ferry, users need parking, which is most convenient in the Water Street Garage. With a passenger capacity of 400 and multiple trips to Block Island each day, the Water Street Garage often fills up with ferry parking before noon, especially in July and August.

Comparable Museums

Table 4 provides data on some of the factors that drive museum visitation for other regional museums as well as museums with similar topics and visitation as the planned NCGM.

Institution	Annual Attendance	Location	Location Type	Location Population	Parking	Proximity to Other Tourist Attractions	Proximity to Other Significant Sites
Mystic Seaport Museum	252K	Mystic, CT	Rural	4,249	Free parking at two museum pkg lots - 1,032 spaces.	10 miles from New London. Less than a mile from Mystic Aquarium and downtown Mystic.	Off of route 27, 15-minute drive from USS Nautilus
USS Constitution Museum	440K	Boston, MA	Urban	684,379	No parking onsite. Pkg is available at parking garage - \$22.50 per 2 hours. The museum does validate for pkg and recommends taking public transportation.	Located on the Freedom Trail, and adjacent to the USS Constitution, NPS Charlestown Navy Yard Visitor Center, and a 10 min walk from Bunker Hill Monument in a more residential neighborhood than the downtown area.	Easily accessed by public transit and specialized tourist trollies that run through Boston.
USS Nautilus / Submarine Force Museum	150K	Groton, CT	Rural	38,692	Parking is onsite and free	Across the river from New London. Adjacent to the major east coast submarine base. 8 miles to Mystic attractions.	15-minute drive from Mystic Seaport/Aquarium.
New Bedford Whaling Museum	100K	New Bedford, MA	Urban	95,239	No onsite parking. Metered street pkg downtown. Paid parking one block away from garage with 972 spaces, \$6 per 2 hours.	In downtown New Bedford. New Bedford Art Museum, New Bedford Fire Museum, Richard Duff-Jones House and Garden Museum all within walking distance	Close to routes 6 & 18
Mystic Aquarium	750K	Mystic, CT	Rural	4,249	Free parking at museum lot - 647 spaces. More spaces near the site (total of 2,902 off street pkg spaces total in the area)	Adjacent to Olde Mistick Village shopping, and less than 2 miles from Mystic Seaport.	Directly off of Interstate 95, 15-minute drive from USS Nautilus

Institution	Annual Attendance	Location	Location Type	Location Population	Parking	Proximity to Other Tourist Attractions	Proximity to Other Significant Sites
Connecticut Science Center	305K	Hartford, CT	Urban	123,088	460 spot garage onsite, 4 more with a total of 3,000 more spots within 5 blocks, metered parking downtown. Average parking cost is \$8-14 for 3-5 hours.	Close to several, including Wadsworth Atheneum, the Old State House, Bushnell Park, and a short walk to the Connecticut State Capitol. Walking distance to downtown. Close to some restaurants.	Next to the Connecticut Convention Center – very visible from the highway.
Nauticus (and Battleship Wisconsin)	350K	Norfolk, VA	Urban	244,601	No onsite parking. Street pkg is available.	In downtown area near many stores and restaurants. Close to Town Point Park, and MacArthur Memorial	Near to Naval Station Norfolk and other major military installations.
Planned National Coast Guard Museum	TBD	New London, CT	Urban	26,550	On-street parking and in public pkg garage shared with the ferry terminal and Amtrak station.	The site is near the CGA.	The site is adjacent to a transportation hub and a 15-minute drive from Mystic area attractions, though New London is not associated with these sites.

Table 4. Comparable Museum Data

Source: Compiled by Museum Insights, 2020

Updated Museum Attendance Projection

Projecting museum attendance is far from an exact science. Much of the market research for the prior updates focused on market penetration and capture ratios for the regional market. This approach is typically used for regional museums such as science centers. With the shift in emphasis to a more national model, using capture ratios for attendance at U.S. science centers as a basis for the NCGM's attendance does not offer the most reliable basis for a projection.

In addition, the 2017 Addendum projection of 292,000 visitors includes 158,000 ferry passengers, 9% of all ferry passengers and comprising 46% of total Museum visitation. The bulk of the ferry passengers who park in the Water Street Garage and then use the pedestrian bridge to get to the ferry will be day-trip passengers on the Block Island Ferry, often encumbered with beach paraphernalia. While some of these passengers may stop by the Museum, a Museum visit is an unlikely adjunct to a planned day at the beach or the bars of Block Island. Adjacency to the busy ferry landing will certainly gain valuable visibility for the Museum but is unlikely to result in such significant visitation.

An alternative way to assess potential Museum visitation is to compare the proposed Museum with other museums with similar national prominence and other similarities. The closest geographic and thematic analog is likely Mystic Seaport Museum, another nationally prominent museum on the waterfront 10 miles from New London. Mystic Seaport reports 250,000 paid visitors a year. Other nearby nationally significant comparables include the USS Constitution Museum in Boston which reports 440,000 free visitors to the museum adjacent to the fabled fighting ship, and the lesser-known New Bedford Whaling Museum, which reports 100,000 paid visitors to a location in a city similar to New London.

NCGM Annual Attendance Projections

2008 SMP: 210K

2014 Addendum: 184K – 440K

2017 Addendum: 270K – 418K
(stable year attendance: 292K)

2020 Update: 200K – 300K

The current Navy Museum only serves about 100,000 visitors per year, largely because of its location on base which requires cumbersome security procedures that make visiting difficult for the general public. In contrast, the National Museum of the Marine Corps, which does not have these security requirements, welcomes almost 500,000 per year to their iconic building. While the USCG has often stated that the National World War II Museum is a model, it is not a reasonable comparable. With 300,000 SF of museum space, an associated hotel and conference center, a location in tourist-heavy New Orleans, and its own stop on the trolley line, it is not surprising that it has nearly 800,000 annual visitors.

Reviewing these regional comparables and related national military museums, an estimate of 250,000 annual visitors remains reasonable with a potential range from 200,000 to 300,000.

The most significant variable in assessing potential visitation may well be the availability of convenient parking. As noted elsewhere in this update, the City of New London has faced challenges in finding funding for the needed expansion of the Water Street Garage. Without that expansion, potential NCGM visitors will be competing with ferry passengers for limited parking spaces in the Water Street Garage and, when full, in the surrounding area. Parking challenges could contribute to a 10% to 30% decrease in potential visitation.

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CHAPTER 13: MILITARY MUSEUMS

2008 Strategic Master Plan Summary

Relying on the 2006 report to Congress on Military Museums, the SMP provided data on military museums run by the Department of Defense, including number of museums in each branch of the armed forces, visitation statistics, staffing, budgets, and partnerships with non-profits.

2014 Addendum

This chapter was not updated in 2014.

2017 Addendum

This chapter was not updated in 2017.

2020 Update

In 2013, the annual report on military museums to Congress that the SMP relied on for its data was discontinued. Based on this change in available data, changes in the Museum concept, and Museum Insights' understanding of peer institutions, the 2020 Update provides updated information on national military museums and similar institutions. The following section provides a detailed overview of museums operated by the other branches of the armed forces. In addition to the museums requested by the USCG, this update includes the proposed National Museum of the US Navy and the Museum of the United States Air Force. Please note that while the National World War II Museum has a congressional designation as a "national" museum, it operates as a 501(c)3 nonprofit and does not receive any appropriation from Congress. It is funded entirely by earned revenue, contributions, and grants. The World War II Museum is included in the comparison at the request of the USCG planning team.

Museums by Branch of the Armed Forces

US Army Museums (97)

1. National Museum of the US Army, Belvoir, VA
2. National Infantry Museum and Soldier Center, Columbus, GA
3. US Cavalry Museum, Fort Riley, KS
4. United States Army Aviation Museum, Fort Rucker, AL
5. 4th Infantry Division and Fort Carson Museum, Fort Carson, CO
6. Tropic Lightning Museum, Schofield Barracks, HI
7. US Army Engineer museum, Fort Leonard Wood, MO
8. White Sands Missile Range Museum, WSMR, NM
9. US Army Heritage and Education Center, Carlisle Barracks, PA
10. ...and 88 others listed at: <https://history.army.mil/museums/directory.html>

US Navy Museums (10)

1. National Museum of the U.S. Navy (proposed to be located at the Washington Navy Yard)
2. National Naval Aviation Museum, Pensacola, FL
3. National Museum of the American Sailor, Great Lakes, IL
4. Hampton Roads Naval Museum, Norfolk, VA
5. U.S. Navy Seabee Museum, Naval Base Ventura County PH, Port Hueneme, CA
6. Submarine Force Museum, Groton, CT
7. Naval Undersea Museum, Keyport, WA
8. Puget Sound Navy Museum, Bremerton, WA
9. Naval War College Museum, Newport, RI
10. US Naval Academy Museum, Annapolis, MD

US Marine Corps Museums (6)

1. National Museum of the Marine Corps, Triangle, VA
2. Flying Leatherneck Aviation Museum, Marine Corps Air Station, Miamar, CA
3. Marine Raider Museum, Camp Barrett, Marine Corps Base Quantico
4. San Diego Command, CA
5. The Parris Island Museum, Parris Island, SC
6. WWII/Korea LVT Museum, Marine Corps Base Camp, Pendleton, CA

US Air Force Museums (17)

1. Museum of the United States Air Force, Dayton, OH
2. Air Force Armament Museum, Eglin AFB, FL
3. Air Force Flight Test Center Museum, Edwards AFB, CA
4. Air Force Space and Missile Museum, Cape Canaveral AFS, FL
5. Air Mobility Command Museum, Dover AFB, DE
6. Barksdale Global Power Museum, Barksdale AFB, LA
7. Enlisted Heritage Research Institute, Maxwell AFB, AL
8. Hill Aerospace Museum, Hill AFB, UT
9. Malmstrom AFB Museum - Malmstrom AFB, Mont.
10. McChord Heritage Center - McChord AFB, Wash.
11. Museum of Aviation - Robins AFB, Ga.
12. Peterson Air and Space Museum, Peterson AFB, Colo.
13. Sheppard AFB Heritage Center, Sheppard AFB, Texas
14. South Dakota Air and Space Museum, Ellsworth AFB, S.D.
15. Travis AFB Heritage Center, Travis AFB, Calif.
16. USAF Airman Heritage Museum, Lackland AFB, Texas
17. Warren ICBM and Heritage Museum, F.E. Warren AFB, Wyo.

US Coast Guard Museums (3)

1. US Coast Guard Academy Museum, New London, CT
2. Coast Guard Heritage Museum, Barnstable, MA (privately run)
3. Coast Guard Museum Northwest, Seattle, WA (on base; volunteer-led)

Military Museum Benchmarks

The most significant of the hundreds of federally funded and privately operated military museums are the flagship museums for the three largest services. The congressionally designated but privately funded National World War II Museum is a benchmark institution in that it demonstrates what may be possible for privately funded museums.

	National Museum of the US Navy	National Museum of the United States Army	National Museum of the Marine Corps	National Museum of the United States Airforce	National World War II Museum
Location	Washington Navy Yard (proposed)	Fort Belvoir, VA	Triangle, VA	Dayton, OH	New Orleans, LA
Area (SF)	Still in development	185,000 SF	118,000 SF (anticipated expansion to 200,000 SF)	1,120,000 SF	Approximately 300,000 SF
Annual Appropriation (most recent DoD report to Congress)	N/A	\$1,854,000. (FY 13 while still in planning stages)	\$12,947,814 (FY 13)	\$13,197,153 (FY13)	N/A—Operates as a 501(c)3 non-profit
Location in Chain of Command	Naval History and Heritage Command	US Army Training and Doctrine Command	Education Command	Headquarters Air Force Material Command	N/A
Number of Civilian and Military Staff	N/A	Museum has just opened and is determining staffing levels.	57 FTE Civilian 0 FTE Military	96 FTE Civilian 0 FTE military	443 FTE Civilian 0 FTE Military
Supporting Non-Profit	Naval Historical Foundation	The Army Historical Foundation	Marine Corps Heritage Foundation	Air Force Museum Foundation	N/A
Revenue Streams for Associated Non-Profit	Function Rentals Museum Store Fundraising; note current capital campaign for new museum	Museum Store Cafe Function Rentals, Theatre Simulators Fundraising	Museum Store Cafe Function Rental Theatre Rifle Range Fundraising	Museum Store Cafe Function Rentals, Theatre Simulators Fundraising	Admission Museum Store Cafe Function Rentals Theatre Interactive Experiences Hotel and Conf Ctr Fundraising

	National Museum of the US Navy	National Museum of the United States Army	National Museum of the Marine Corps	National Museum of the United States Airforce	National World War II Museum
Key Sponsors	CSRA Leidos CACI Deloitte General Dynamics Huntington Ingalls Industries Raytheon Rolls-Royce EMR Salesforce	Boeing General Dynamics Lockheed Martin Bell Helicopter Coca-Cola Foundation General Motors Foundation Honeywell And many others (2017 annual report)	Lockheed Martin Boeing Bell Helicopter Raytheon Innovative Reasoning Rolls Royce North American Susan Davis International (2017/18 annual report)	Lockheed Martin* *per 2019 annual report, Lockheed Martin donated \$10M in 2019 for the construction of a fourth building.	Bollinger Shipyards The Boeing Company Entergy FedEx Corporation Freeport McMoRan General Electric Hancock-Whitney JetBlue Airways Lamar Advertising Pan-American Life Insurance Group Pratt & Whitney Shell Oil Stone Energy Stonehenge Capital Superior Energy Services WalMart Stores Iron Mountain Union Pacific (current supporter page)
Amount Non-Profit returns to museum (average)	No data	No data	Still actively funding building construction and exhibit development; all funds support building and exhibit development.	\$250,000 and active in soliciting donations and sponsorships and in operating related activities, including the store, cafe, and simulators.	N/A
Collection Storage Area (SF)	In development	Off-site. Nationally centralized at Army History Center.	In the process of expanding to 50,000 SF; anticipated completion 2025	338,880 SF (includes exhibit prep) FY13	16,800 SF total including 4,300 onsite
Number of Collection Objects	No data	2,000 on site	65,000	136,000	200,000 (archives are counted as objects)

Table 5. Military Museum Benchmarks
Source: Compiled by Museum Insights, 2020

Other Museum Benchmarks

In addition to the flagship military museums identified by the USCG, the following museums (Table 6) that focus on military or maritime history provide insights into operations for this type of museum. All of these museums have similar revenue streams, operating budgets and have significant curatorial functions. This information comes from reviews of annual reports and conversations with staff at these institutions.

	Nauticus	New Bedford Whaling Museum	USS Constitution Museum	National World War II Museum (for comparison)
Location	Norfolk, VA	New Bedford, MA	Boston, MA	New Orleans, LA
Area (SF)	120,000 SF	120,000 SF	~ 20,000 SF	300,000 (+) SF
Annual Budget	\$1.8M	\$4.9M	\$2.9 M	\$100M
Revenue Streams	Admission Museum Store Cafe Function Rentals Theatre and Interactive Experiences Fundraising	Admission Museum Store Function Rentals Fundraising	Admission by Donation Museum Store Function Rentals Fundraising	See above
Number of Staff	Data not available	41 employees - 25 full time and 16 part time	42	443
Number of Collection Objects	Data not available (not a collecting museum)	750,000	2,000 artifacts 10,000 archival records	200,000 (archives are counted as objects)
Collection Storage Area (SF)	Data not available	Data not available	2,300 SF onsite. No offsite storage	16,800 SF total including 4,300 onsite

Table 6. Other Museum Benchmarks
Source: Compiled by Museum Insights, 2020

Curatorial and Collection Management

Curatorial functions are critical to the success of all of these museums. At each museum, visitors come to engage with the "real thing," which must be supported by staff curators who care for objects, manage acquisitions and loans, and prepare objections for exhibit. In addition to staff, appropriate storage and workspace must also support these functions. Note that the proposed National Museum of the US Navy is not included because it is not yet developed.

	National Museum of the United States Army	National Museum of the Marine Corps	National Museum of the United States Airforce	National World War II Museum
Number of Collection Items	2,000 on site, which are a subset of the US Army Center of Military History's collection of over 540,000 objects	65,000	136,000	200,000 (includes archives)
Percentage of Collection on display	70%	Less than 10%	7%, though 45,000 items are on loan to 771 institutions	1-2%; more if digitization efforts included
Collection Storage Space	Temporary basement storage; large offsite storage	In the process of expanding to 50,000 SF; anticipated completion 2025	300,000SF, mainly on adjacent Wright-Patterson AFB	4,300 SF Onsite 11,000 Warehouse for macro-objects, incl workspace 1,500 rented in storage lockers
Curatorial Workspace	Limited; photography lab, plus office space	40,000 SF	5,000 SF	Around 1,000 SF, spread between the above areas
Staffing	1 Chief of Exhibits/Chief Curator 4 Curators	6 Curators 9 split between Office of the Registrar, Restorations, and Museum Specialists	9 collections Curators 5 research curators 2 Manuscript curators 20 split between exhibits, museum technicians, registrar/collection mgr 14 restoration Specialists.	4 Curators 6 Collections care 3 Digitization team
Exhibit Budget	N/A	N/A	\$300,000	\$50,000/rotating exhibit
Conservation Budget	Not yet known	\$100,000/year	\$10,000	\$60,000/year
Acquisition Budget	Not yet known	Handled by Marine Corps Heritage Foundation as needed.	None	Receive high volume of donations. Conduct separate fundraising for large acquisitions (planes, boats, etc).

Table 7. Curatorial and Collection Data at Military Museums
Source: Compiled by Museum Insights, 2020

Foundations and Finances

The following figures for the non-profit foundations associated with the federally funded military museums are drawn from publicly accessible Internal Revenue Service 990 forms that non-profit organizations are required to file. This data is from the latest publicly available reports for fiscal year 2018.

While all of these museums tell different stories and take various forms, their foundations successfully use the same areas of revenue generation (museum store, theatre and immersive experiences, cafes, and event rentals), in addition to dedicated and ongoing fundraising. In all cases, the foundations continue to provide support for current operations as well as prepare for future building projects, exhibit upgrades, and unknown future needs.

	Naval Historical Foundation	Army Historical Foundation	Marine Corps Heritage Foundation	United States Air Force Foundation	National World War II Museum
Revenue					
Contributions and Grants	\$434,425	\$38,047,791 (Capital Campaign underway)	\$9,602,810	\$2,681,257	\$53,772,518
Earned Revenue	\$0	\$180,539	Events: \$342,767 Store: \$338,451 Theatre/Rifle Range: \$218,797 Cafe: \$175,237 Total: \$1,075,252	\$1,155,176 Theatre: \$1,124,023 (expenses, 406249) Museum Operations: \$31,153	\$44,224,396
Investment Revenue	\$27,456	\$19,622	\$229,875	\$711,238	\$2,979,969
Other	\$45,663 (Includes gift shop revenue, rentals, and a loss of \$62,689 on fundraising)	-\$10,882 (Pre-opening. Represents a small loss on fundraising events and a \$16,910 loss on inventory/ museum store)	\$6,851	\$2,641,943	\$3,652,929
Revenue Total	\$507,544	\$38,237,070	\$10,914,788	\$7,189,257	\$104,629,812
Expenses					
Grants	\$17,401	\$7,000	\$256,908	0	\$56,493
Salaries and Benefits	\$172,204	\$2,408,300	\$2,203,556	\$2,004,928	\$19,339,114
Fundraising Expenses	0	\$0	\$394,866	\$0	\$4,191,597
Other	\$352,747	\$3,388,574	\$9,652,107	\$1,843,962	\$4,412,016
Expense Total	\$542,352	\$6,052,749	\$12,507,437	\$3,848,890	\$63,516,251

Table 8. Fundraising and Finances of Non-Profit Foundations with Federal Funded Military Museums

Source: Compiled by Museum Insights, 2020

Building Military Museums

The histories of several of the national military museums benchmarked in this chapter demonstrate that these museums take time to develop, often getting established as smaller on-base museums before planning, designing, building, and occupying the large, prominent buildings we associate with them today.

As an example, the Marine Corps operated a series of smaller museums, including a storefront location, in Washington DC starting in 1940 and building up to the 2005 establishment of the current dramatically designed museum. That new facility, in turn, was constructed in phases, with the final section of the first phase currently nearing completion and further phases anticipated.

The National Museum of the United States Air Force has existed since 1923. It was not until 1955, when it gained the support of the Air Force Museum Foundation, that it began to repeatedly expand, completing a major building project roughly every ten years. The facility now spans four buildings and 1.1 million SF. The Foundation, a private non-profit contributed \$87.3 million or 94% of facility construction costs with the balance federally funded. In addition to strong support from the Foundation, the museum has also benefited from being able to house some aspects of operations, including collection storage, on the adjoining Wright-Patterson Air Force Base.

The just-opened National Museum of the United States Army reflects the culmination of years of work by the Army Historical Foundation, as well as the support of the well-established Army Museum Program, which currently supports 97 museums. Within the Army Museum Program, some of their museums have remained on-base with limited public access, while others have moved to larger spaces with greater access, typically near a major base. One example is the small museum in the former hospital building at Fort Benning (home to the Army infantry) that eventually grew into the recently opened 100,000 SF National Infantry Museum, located just outside the entrance to the base.

The National World War II Museum, while possessing a congressional mandate, exists as a private nonprofit, solely the product of its foundation, unaffiliated with any branch of the service, and funded independently from any government agency. The museum began as a small project to preserve the history of the New Orleans-built Higgins Boats which were instrumental in the success of the D-Day operation, evolved into the D-Day Museum, and eventually transformed itself into the current World War II Museum. With significant attention and high-profile donors and supporters, the World War II Museum's campus of buildings has been built out over time and continues to grow with the most recent addition of a hotel and conference center. A significant contributing factor to its success is its prominent location at a stop on New Orleans' tourist-friendly trolley system.

In short, national museums take time to develop and build. In all of these cases, the organizations have started small, often benefitting from proximity to bases and a cadre of service members that can support museum operations, experiment with different programs and exhibits, and work to build a broad base of support for growth of their physical sites and eventual national impact.

Sustaining Military Museums

Once built, national military museums universally rely on federal appropriations supplemented by activities of a non-profit, supporting foundation, or other partner. Federal funds support staff, maintenance (facility and exhibit), care for museum collections, and other direct costs associated with the museum. While funded from each military branch's appropriation, the majority or entirety of museum staff are civilians, in order to get the necessary level of specialized expertise. In addition to a director, military museums typically have a robust group of curators, exhibit preparators, museum technicians, and visitor services and education staff. This staff reports to the command of the branch responsible for museums, often the heritage or education command.

Federal funds are often not enough to sustain improvements to exhibits, conservation work, and other needs; they also may not be spent for some expenses. In these cases, the non-profit foundation steps in to provide financial assistance. In all cases, the revenue models for these non-profits are remarkably similar. The non-profit operates activities at the museum that add to the visitor experience such as cafes, simulators, giant screen films, gift shops, and function rentals. These activities generate some profit, but the bulk of money comes from donations and ongoing fundraising efforts ranging from individual donations to corporate sponsorships.

The National World War II Museum, as an independent non-profit, relies entirely on donations and earned revenue. The museum actively fundraises at all levels and maintains a lengthy list of corporate sponsors. Donations and fundraising are supplemented by revenue generating activities, including admission, interactive experiences, cafes, function rentals, gift shop, and new hotel and conference center.

Recommendations

All of the national military museums rely on a strong partnership with an associated non-profit to enhance the visitor experience and support museum operations. In each case, the relationship is built on a sense of good will and shared mission that is codified by legal agreements.

It is recommended USCG take the following steps to develop a similar relationship:

- Work collaboratively with the NCGMA or other cooperating non-profit to support a shared mission and vision for the national museum that the USCG feels comfortable committing to manage and that the cooperating non-profit can financially support.
- Develop MOAs with the cooperating non-profit to govern the relationship and responsibilities of both parties.
- Work with the non-profit to develop a strategic plan, updated every five years, that incorporates shared programmatic, operational, and capital project initiatives and that identifies fundraising priorities.
- Once open, work closely with the non-profit to balance revenue generating building uses, such as facility rentals, with daily operations and the visitor experience.

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CHAPTER 14: ATTENDANCE

2008 Strategic Master Plan Summary

The SMP provided an attendance estimate for a stable operating year at the Museum, which was expected to be 234,000 in 2016. The SMP recommended that the Museum use an attendance figure of 220,000 for budgeting purposes and set a goal of eventually hosting 250,000 visitors per year. This estimate was based on attendance numbers of benchmark institutions, demographic analysis, economic trends, and tourism data. These numbers also depended on assumptions including easily accessible parking spaces for visitors, a ticketed Feature Theater, and that the Museum would be at an accessible site in New London where it is complemented by other activities in the surrounding area.

Benchmarking

The SMP relied on benchmarking similar museums to provide the attendance estimate. Museums were divided into two categories: military and maritime museums and museums in the New London area.

Analysis of the military and maritime museums found that attendance ranged from 75,000 at the Chesapeake Bay Maritime Museum to 1,250,000 at the National Museum of the US Air Force. The SMP stated that some of the high numbers could be due to the fact that they represented large museums with IMAX theaters, which often attract larger crowds. The report also made use of ratios measuring attendance and size of the surrounding population, expecting that the museums with larger attendance drew from a larger population.

In terms of attendance at area institutions, Mystic Aquarium and the Maritime Aquarium in Norwalk had the highest, with 750,000 and 500,000 visitors respectively. However, those institutions were the highest by a wide margin: other Southeastern Connecticut museums had attendance ranging from 20,000 to 300,000. Overall, Connecticut tourism numbers were declining in the late 1990s and early 2000s, but some sites had experienced upticks in recent years. Area museum attendance suggested that peak attendance would be in July and August, and the lowest attendance would be in January.

Tourism and the New London Area

The NCGM site in New London near Fort Trumbull had many advantages, including the large population within a 100-mile radius, proximity to the water, and the other tourist attractions in Southeast Connecticut. Although the SMP concluded that overall, the New London regional market was a good fit, there were also significant challenges, such as the City of New London's small population, the public perception of a lack of safety downtown which was supported by crime statistics, and lack of other nearby evening and weekend activities.

Since one of the assumptions of the analysis was that there would be other activities locally to draw visitors to the area, the dearth of other activities was concerning. There were also several challenges relating to the proposed site in the Fort Trumbull area: low attendance at the Fort Trumbull visitor center, and the uncertainty

of planned development to provide key infrastructure and attract more people to the area. For more information on how infrastructure requirements played into site selection, please see Chapter 5.

2014 Addendum Summary

In the 2014 Addendum, Chapter 14 was combined with Chapter 12. Please see Chapter 12 for the 2014 Addendum Summary.

2017 Addendum Summary

As with the 2014 Addendum, Chapter 14 content was combined with Chapter 12. Please see Chapter 12 for the 2017 Addendum Summary.

2020 Update

Please see Chapter 12 for the 2020 Update information.

CHAPTER 15: MUSEUM PROGRAMMING

Note: The SMP Summary titled this Chapter Customer Learning Services. The titled was changed to Museum Programming in the 2014 and 2017 Addendums.

2008 Strategic Master Plan Summary

Customer Learning Services

This chapter developed the concept of visitors versus customers/brand customers.

- **Visitors:** Come to the museum, often only once, to experience its exhibits and other learning opportunities.
- **Brand customers:** Trust the museum as a place for additional learning experiences or services and return regularly for programs and events outside of its exhibits. These customers offer a way for the museum to develop revenue streams and long-term relationships that can cultivate donors.

The chapter presented six different kinds of programming to attract brand customers:

- **Learning Center Programs:** The details of the Learning Center operation were provided in chapter 9, so they were not described again in this chapter.
- **Function Rentals:** Function rentals for community groups, corporate groups, private events, birthday parties, and USCG reunions could generate revenue, particularly during the first years of operation when there was still considerable “buzz” about the museum. The SMP recommended that the architectural design should establish “zones” within the museum that work well for both day-to-day use and after-hours function rentals. Similar to function rentals, the feature theater could be used to host film series, paired with receptions and speakers, to generate revenue during the quiet winter months.
- **Guardian History Center:** Modeled on the popular Navy Log at the US Navy Memorial, the center would offer current and former USCG members a way to “log” their time in service. Additional access to find or connect with others could be purchased.
- **Film Series and Maritime Programs:** As the museum developed past opening day, it could develop traveling exhibits or even sell exhibit plans to other museums as a source of revenue. However, it would take time for the staff to have appropriate expertise to develop these, and it would require additional marketing support.
- **Touring Exhibits:** A more readily achievable revenue stream would be developing a small traveling exhibit and retail outlet that could travel with the USCGC *Eagle* whose proceeds would return to the museum.

2014 Addendum Summary

In 2014, this chapter was retitled Museum Programming, with Museum Programming representing the day-to-day operations of the Museum. These programs range from the one-time visitor to the repeat visitation of participants in an after-school program.

The addendum divided the Museum's audiences into:

- **Visitors:** Primarily there to explore the museum galleries.
- **Program Participants:** There to engage in specific programs beyond the exhibits such as after school programs, lectures, and function rentals. Program participants typically arrive by car and have an expectation of convenient parking, which could be challenging at the new site.



Evolution of Museum Programming

Since 2008, the change in location of the Museum produced related changes in programming. Examples include:

- **Theater, Learning Center, and Outdoor Space:** The former site at Fort Trumbull allowed for a large theater, Learning Center, and outdoor space, whereas the new downtown space was much smaller and did not allow for these areas.
- **Event Center:** Recommended for the new site was a large event center which could be divided into smaller program spaces during open hours, and a small lecture hall. Spaces should serve multiple uses; for example, the lecture hall should become the “multi-purpose studio,” which could operate as a lecture

hall, small exhibit gallery, student lunchroom, community meeting space, project space, and reception space.

- **Art Gallery:** Similarly, the 1,000 SF art gallery should be able to accommodate traveling exhibits, and program space for school groups should be created within the galleries.

The Addendum suggested that additional market research should be conducted to determine what types of uses would be most profitable considering other downtown spaces so that the Museum's infrastructure could be designed appropriately, especially given tight budgets.

The move from the more open character of the Fort Trumbull area to downtown would shift the visitation to more tourists and fewer residents and meant that the Museum was now in direct competition with more established downtown programs for residents. As such, the visitation and program would likely take on a seasonal character. Taken together, the loss in spaces within the Museum and potential for seasonality meant that the NCGMA could be limited in its ability to operate an annual schedule of programs that would generate net revenue.

2017 Addendum Summary

Even though the building had increased in size since 2014, prioritizing the most important spaces and making spaces multi-purpose to serve both visitors and program participants remained the primary goal. At the same time, the 2017 addendum added back the feature theater and introduced two new spaces which restored an emphasis on serving students: the STEM Learning Center (elementary through high school) and the Early Learning Center (pre-k). The addendum retained the emphasis on event space for rentals and for programs within the gallery spaces.

Types of Programming

The Museum would present four main types of programming:

- **People to People Programs:** Used staff members, primarily current and former USCG members volunteering their time, to interact with visitors through structured programs like demonstrations and informational interactions. Examples included the "Coast Guard Welcome Team," uniformed USCG personnel; gallery and school group docents; student interns; and "Experts and Advisors," who could support the development of new exhibits and events.
- **Group Programs:** Proposed for large, organized groups like schools, camps, and scout groups. Much like the SMP Learning Center concept, though without the related dedicated space, these groups would be offered an orientation, space to eat lunch, and the option to pay a fee for access to additional materials or experiences.
- **Individual Programs:** Served visitors that came to the Museum independent of an organized group. Their visit would be enhanced by "Floor Explainers," who would provide additional information about exhibits and offer demonstrations and discovery carts that would enhance the visit.

- **Margin of Excellence Experiences:** Considered an option for future development. These programs would depend on either grants or fees for their operation; in some cases, they might cover their own costs and/or generate a small amount of revenue. Ideas included the “Qualification Program,” for young adult visitors, who would select from different career paths within the USCG and complete special activities towards that qualification in the exhibits.

For younger visitors, the addendum recommended developing youth and family activities including workshops and week-long camps for children during school vacation week, as well as “camp-in” overnight visits, and birthday parties.

For adults, lectures, classes, and opportunities for domestic and international study tours, such as collaborating with Road Scholar (formerly Elder Hostel) were recommended.

Finally, the addendum encouraged the Museum to pursue large-scale special events that used the entire Museum for annual celebrations and partnerships with local festivals, to attract a large number of visitors and generate positive publicity.

2020 Update

Preliminary Master Interpretive Plan (2017)

The MEAP composed of members of the USCG, the NCGMA and consultants Gallagher Associates and History Associates, completed the Preliminary MIP (Exhibit A) in May 2017. The plan included mission and vision statements, interpretive goals and themes, and a framework for exhibits. The plan is discussed in full in Chapter 7; please see Chapter 7 for additional details.

Updated Master Interpretive Plan (2020)

In May 2020, the USCG and NCGMA updated the 2017 Preliminary MIP (Exhibit A) with similar interpretive goals. The resulting 2020 MIP (Exhibit B) added a renewed focus on current and former Coast Guard members as a well as a stronger emphasis on virtual and online programming. It also reduced the emphasis on STEM programming. Like its predecessor plan, the 2020 MIP was approved by both the USCG and NCGMA.

The 2020 MIP focused on the following programs areas:

1. The **Visitor Reception and Orientation** experience will provide a point of entry for all visitors through an introductory film and interaction with staff.
2. The **Permanent Exhibit** will introduce visitors to the work of the USCG. Five key areas align with CG activities: “Lifesavers around the Globe,” “Enforcers on the Seas”, “Defenders of our Nation”, “Protectors of the Environment,” and “Champions of Commerce.” These exhibits will include interactive elements for multi-generational learning and may include VR/AR simulator experiences.
3. **Temporary Exhibits** will highlight specific areas of USCG operations as well as providing a space to showcase the Coast Guard’s extensive and varied collection.

4. The Museum will offer **Youth Programs** designed to engage children and young adults in the mission of the USCG and provide pathways to enlistment. These programs will be curriculum based and conducted in partnership with community schools.
5. **Adult Programs** will draw in community members to learn more about the USCG in their own community and around the world. Adult programming may also discuss broader maritime and environmental themes.
6. The Museum's stunning waterfront location will provide an attractive backdrop for **performances by the Coast Guard Band**.
7. The Museum will become a **gathering place for current and former USCG members**. Programs designed for these members of the Coast Guard Family will be offered in person and online.
8. Visitors to the Museum will have the opportunity to **meet with currently serving members of the USCG** or interact with them virtually at sea.
9. The sweeping views of the water from the 5th deck will make the NCGM a premiere location for **private events** in New London.
10. The **grab and go Museum Cafe** will provide a space for visitors to relax and refuel during their Museum visit.
11. The Museum will engage with the USCG's far-flung constituents through **Social Media** experiences which provide rich web and social media content ranging from interactive games, live streams of events, videos, and virtual tours.
12. A **Memorial Terrace** with a view of the harbor will offer a quiet and reflective space to honor those who have given the ultimate sacrifice in service to the USCG and the Nation in the line of duty and to honor the key components of the CG Community—Active Duty, Reservist, Civilians, Coast Guard Auxiliary, and Retirees.

STEM Center

Since 2017, the NCGMA has moved forward with an intention to develop the STEM Center space into a tech-driven, immersive learning center capable of serving youth and adults pursuing training in STEM topics as well as for leadership and team building programs. The STEM Center will also link to a qualification program connected to digital experiences in the exhibit galleries. Currently, the STEM Center content is outside of the scope of the USCG's exhibit design process and the NCGMA has not yet retained an experience designer to develop definitive plans for the STEM Center. As such, the final form of the STEM Center and the specific programs that it will host are yet to be defined. In 2020, the USCG and NCGMA began discussions about the best way to develop and manage STEM Center. These discussions are ongoing.

Theater Programs, Simulators, and Outdoor Activities

Reviewing current program descriptions in the 2020 MIP (Exhibit B) and architectural plans, it appears that the Museum will have the capacity to show films, and it is likely that an introductory film and about the Museum and the USCG will be developed. As stated in the 2014 and 2017 addenda, the size of the theater and plan to

show the film for free eliminate it as a potential source of revenue. Based on our understanding of the current plans, there will be no standalone simulators connected with the Museum.

In 2014, most of the outdoor programming was eliminated because of the move to the smaller site, where the Museum building would take up the majority of the available land. Since 2017, the effort to expand onto a patio area on the waterfront for additional food service and programming space have been determined to be inappropriate by the City of New London. There is also continued interest in making the pier near the Museum the home port for the USCGC *Eagle*. At this time, it appears that outdoor programming is unlikely to be possible.



Earned Revenue

As in 2017, it is expected that the NCGMA (or a successor organization) will be permitted to operate revenue generating activities, including the museum store, café, and event rentals and other fee-based programs such as the STEM Center and other yet to be determined programs. These activities will most likely be contracted out by the NCGMA to one or more private contractors. The USCG and the NCGMA are still in discussion as to how these activities will be managed.

CHAPTER 16: PRINCIPAL OPERATION ASSUMPTIONS

2008 Strategic Master Plan Summary

The SMP provided a set of data and assumptions that allow for the calculation of “Design Day,” the day in which the Museum will have to accommodate the most visitors. Visitation to the Museum was expected to follow typical patterns of northern, indoor museums with most visitation occurring March-October. March-May would be characterized by school groups, while June-October would primarily be tourists and some local residents.

The Museum would be open seven days per week from 10am-5pm during summer, and the busiest days would be Friday through Monday. During the winter, the Museum would be open Tuesday through Saturday 10am-5pm and on Sunday from 1pm-5pm. Winter visitation would be fairly stable throughout the week with a slight weekend increase.

Based on this data, “Design Day” then represented a Saturday in August, when the Museum might need to accommodate 2,103 over the course of the day, with a peak load of 841 people. Considering an average dwell time of two hours, this meant 421 people needed to be able to pass comfortably through the Museum each hour, and over 300 parking spaces were needed to accommodate these visitors.

2014 Addendum Summary

In 2014, information in Chapter 16 was discussed in Chapter 24, Five Year Operating profile. Please see Chapter 24 for the 2014 Addendum Summary.

2017 Addendum Summary

In 2017, information in Chapter 16 was included with the content of Chapter 24, Five Year Operating profile, which was then renamed Chapter 16.

2020 Update

Please see Chapter 24.

Design Day

The day in which the museum will have to accommodate most visitors.

If facilities can accommodate Design Day, they will likely function well during other use times.

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CHAPTER 17: EARNED REVENUE – RETAIL OPERATIONS

2008 Strategic Master Plan Summary

Museum Store

Retail outlets serve the Museum's educational mission by providing a way for visitors to remember their visit or expand upon it through books or other learning materials while at the same time generating revenue to support the Museum. The Museum's store should have an attractive storefront within the Museum thoughtfully positioned near the exit and clearly visible from the lobby. In 2008, plans allocated approximately 1,500 SF of retail space, which should be optimized for customer flow with attention to the number of cash registers, entry/exit points, and appropriate displays. Some of the space should also be allocated to inventory storage and other related functions. In addition, the store should offer sales through a web outlet, positioning itself as the best place to find merchandise related to the USCG. Merchandise should include a mix of branded items, items related to exhibits, maritime related items such as lighthouse themed items, science kits, toys, books, and souvenir items like stationery and desktop items. Items should include inexpensive items that will appeal to student groups with limited budgets and more expensive items that will appeal to adult visitors. The store should avoid very expensive items unless they routinely sell.

The SMP anticipated approximately \$3.00 of gift store sales per visitor and net income of 20% of gross sales. Using this data, the Museum could expect to see approximately \$150,000 of net income from retail operations, including web sales. These numbers assumed that the Museum would independently manage the store. The SMP also provided preliminary information on contracting out the operation of the store, which would reduce revenue coming back to the Museum. Based on the experiences of nine museums that contracted out museum store operation, the SMP recommended specific contract details such as how much revenue would return to the Museum and what types of other support the Museum would be expected to provide. The chief benefit of contracting out Museum store operation appeared to be managing web sales. The SMP concluded that there were pros and cons to both self-operation and contracting out operation that would become clearer the closer the Museum got to opening day.

2014 Addendum Summary

Reduced Museum Store

Following the move to the smaller, downtown site, spaces for the Museum's store and café were combined. As a result, the 2014 Addendum addressed changes to the café within Chapter 17 and eliminated Chapter 18 on the Museum Café. The new concept design allocated only 1,400 SF for both the café and shop, a reduction of over 1,000 SF. This significant reduction in size led to corresponding decreases in revenue because the store could accommodate less merchandise and fewer people. Average spending per visitor dropped to \$1.20, and web sales were expected to be less than 1% of in person sales. The reduction in size of the café from a more full-service restaurant to a grab-and-go operation would also limit sales. As a result, the NCGMA was now expected to earn approximately \$40,000 per year in net revenue from the store and café combined. This number

was also lower because the NCGMA determined that they would contract out the operation of both the café and shop, resulting in a smaller percentage of the profits returning to the NCGMA.

The 2014 Addendum noted that the new spaces allocated to the store were inadequate based on museum retail industry standards for a museum of this size, which recommended 1,200-1,500 SF of retail space, plus 600 SF for storage. Combined with the small space for the café, the 2014 Addendum expressed concern that the Museum might not find a contractor interested in operating these spaces because of the small amount of revenue they would be able to produce. The addendum concluded with recommending consultants and companies with a proven track record of museum store management that might be contacted to develop or run the store and café.

2017 Addendum Summary

Combining Earned Revenue Chapters

Based on additional changes, the 2017 Addendum addressed all sources of earned revenue in Chapter 17, effectively combining Chapter 17 (retail), Chapter 18 (café), Chapter 19 (function rentals and catering) and Chapter 21 (membership) into one. All of these areas had seen changes since 2014. The most significant change was that the 2017 Addendum expected that the USCG would cover all core operation costs without ongoing support from the NCGMA. The NCGMA would continue fundraising efforts and might operate “Margin of Excellence” activities. These activities would be “nice to have,” but were not critical to the success of the Museum as the Museum was not counting on these revenues to fund operations. The 2017 Addendum did not provide updated revenue projections, since it was expected that most of these activities would be contracted out and potential revenue would be the direct result of business plans developed by the future operator.

Retail and Food Service

Square footage for the Museum’s store increased in 2017 to 1,800 SF and an additional 200 SF for an office for the store manager. This allocation was aligned with the 2014 Addendum recommendation. An additional 1,000 SF of storage space for merchandise would be leased at undetermined off-site location because there was not space for it within the Museum building. This was, at best, inefficient. It was unclear if the NCGMA would manage the store or contract it out. Based on conversations with a vendor that manages store operations at other military museums, the addendum noted that the proposed store size was smaller than desirable, especially when it came to space for storage, cash handling, and merchandise storage, pointing out that for items like clothing which come in multiple sizes, those sizes need to be readily accessible for restocking. The 2017 Addendum also reassessed per visitor sales. It was still expected that if contracted out, the NCGMA would see only 10% of revenue, but that visitor spending might increase to \$1.50-1.75 per person.

Based on the increasingly limited space for food service (now only 200 SF), the 2017 Addendum recommended allocating a small space within the Museum’s store which could sell beverages and snacks. Preferably, the vendor managing the store could also manage simple food sales.

Event Center

The programmed space for the event center and catering kitchen was reduced by about 1,000 SF in 2017, but it was still considered adequate. The addendum anticipated that the spectacular views would draw in renters and recommended targeting regional residents as well as the national USCG community. The previously recommended study of function rentals in the New London area to understand the possible competition, amount of revenue that could be expected, and how best to target marketing had yet to be completed. Without the completed study, the addendum could not assess how much revenue rentals might generate that could then be reinvested in Museum operations or exhibitions.

Membership

Previous reports recommended a NCGMA-managed membership program. In 2017, it was unclear if the NCGMA still planned to pursue such a program. While the Museum could not offer the typical membership perk of free admittance, discounts on programs and the store might attract locals. Nationally, current and former members of the USCG might wish to support the Museum through membership. Membership or sponsorship might also be attractive to some corporate entities. A membership program would also give the NCGMA a base to appeal to for annual giving and other fundraising initiatives.

STEM Center

The NCGMA planned to offer fee-based programming to schools and other groups in the STEM Center as well as in the theater and event center. The 2017 Addendum noted that most museums do not see much net income from school programs, though multi-day summer and holiday programs were often exceptions.

2020 Update

As in 2017, there is uncertainty as to how revenue generating activities will be managed. Additional analysis of the operating models for other military museums will be needed to find the best ways to manage earned revenue opportunities. Space allocated for the shop, café, event center, and STEM Center have not changed significantly since 2017. Likewise, there are no updates to the use of the STEM Center, event center, museum shop, and café.

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CHAPTER 18: CAFÉ FOOD SERVICE

2008 Strategic Master Plan Summary

The SMP outlined a museum café as a revenue generator for the NCGMA. This plan assumed that there would be seating for 75 people indoors, and 75 people outdoors. The model assumed that 25% of Museum visitors would visit the café, and that they would spend \$7.00 each. Given these numbers, the SMP predicted gross sales of between \$392,700 and \$442,750.

The SMP stated that cafés were much riskier investment for museums than other revenue generators, such as a retail store, because food is perishable and a café requires more hands-on staff time to manage. The SMP recommended that only museums with an attendance of over 200,000 should invest in a full-service café, but museums that did not meet the 200,000-visitor mark were sometimes successful with a scaled down version which included fewer tables and more pre-prepared food options. Given the SMP's estimate of 234,000 visitors each year, the SMP concluded that a café was an appropriate choice for the Museum. The SMP noted that a site with a water view could be a draw even for people who were not visiting the Museum, which could help set up the café for success.

The SMP recommended two next steps:

- A café feasibility study
- A study of possible contracts with a food service vendor to better establish profit sharing potential and the amount of net revenue that could be generated from the café.

2014 Addendum Summary

In 2014, Chapter 18 was combined with Chapter 17. Please see Chapter 17 for the 2014 Addendum Summary.

2017 Addendum Summary

The 2017 Addendum continues to combine Chapter 18 with Chapter 17. Please see Chapter 17 for the 2017 Addendum Summary.

Recommendations

In 2020, grab-and-go food service with a small seating area is planned for the Museum. This is appropriate to the Museum's size and the space available. As the Museum nears opening, the NCGMA or other non-profit partner should work with a museum food service consulting firm to negotiate a contract with a food service provider who would also manage catered functions for the Museum. This contract should state the roles and responsibilities of each party, as well as outlining profit sharing. Alternatively, the Museum store operator could take on limited snack food service with a separate contract for a catering operator..

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CHAPTER 19: FUNCTION RENTALS

2008 Strategic Master Plan Summary

The SMP discussed opportunities for function rentals at the Museum. Function rentals should deepen relationships with existing visitors, develop relationships with new visitors, use the Museum in the evening or at times when it is otherwise closed, and generate income to support operations. The NCGMA or other nonprofit partner would manage all fee-based function rentals and catering, directly or through a contract.

The SMP viewed function rentals as a promising area of income for the Museum. With an estimated 35-45 events annually, each with 100 guests and a rental fee of \$1,500, the gross revenue would range from \$52,000 to \$68,000. Though these annual numbers are less than some other museums, the SMP cautioned that the 150-250 attendee-events reported by other museums would primarily be possible in a large city. Although New London is a smaller city, a local caterer stated there was a lack of local venues for more than 150 people, which could be an opportunity for the Museum. The Museum might also be an appealing venue for events for the Coast Guard community locally and nationally. The SMP also recommended marketing to other maritime groups.

The 2008 building concept did not have a designated event space, but there were several possibilities, including the Feature Theater, learning commons or classroom space, galleries, and even rental of the entire Museum. The SMP outlined two types of events that could fill these spaces: mission related events (events that have to do with the Coast Guard) and general events (weddings, birthdays, etc.). For either one of these types of events, the SMP suggested “Co-Production events”, where the Museum would create programming specifically for the event. This programming would connect even general events to the Museum’s education mission.

2014 Addendum Summary

The most significant changes to the function rental plan between 2008 and 2014 were changes to the architectural concept. The Feature Theater and the Learning Center/classrooms were removed, and dedicated function rental space was added. This additional space expanded the capacity to 250-300 people seated (not including the outdoor terrace). The addendum mentioned that there was a statewide study that indicated a need for more wedding venues. Wedding rentals could be a promising additional market for the event space. One challenge was the perception of crime in the area surrounding the Museum. The addendum recommended that the Museum not only make sure that the areas surrounding the Museum, parking areas, and walking routes were safe, but that they were also perceived as safe by the general public.

The available space for rentals altered the income calculations. White Oak Associates assumed between 37 and 50 events per year, each with an average of 125 people and a rental fee of \$1,250. Therefore, the gross rental revenue would be between \$46,250 and \$62,500. This was a modest increase from 2008. The management structure for rentals had also changed. Though fee-based rentals and catering would still be managed by the

NCGMA, both would be contracted out to one vendor. Originally, the catering was to be contracted out and functions managed in-house.

2017 Addendum Summary

In 2017, Chapter 19 was combined with Chapter 17. Please see Chapter 17 for the 2017 Addendum Summary and 2020 Update.

CHAPTER 20: ARCHITECTURAL AND SYSTEMS PROGRAM

2008 Strategic Master Plan Summary

The SMP provided an overview of architectural needs for the NCGM. The chapter was intended as a starting point for the development of the “Architectural Room Book” that would provide detailed descriptions of the spaces needed in the Museum building and provide an overview of the relationships between the spaces that would be needed to ensure the success of the Museum.

Building Overview

Located in New London, Connecticut near historic Fort Trumbull and an active Coast Guard station, the new building should become a regionally recognized landmark that is sustainably designed, universally accessible, and evocative of the Coast Guard’s missions. It should also meet all of the functional requirements outlined in the Room Book with space to expand to meet future needs.

Site Requirements

Internally, the architecture should help visitors understand how to access different parts of the building and act as a glue that binds together disparate exhibit experiences. The SMP concluded that the Museum would need to have multiple floors to accommodate functional needs on the selected site. Anticipating that most visitors would arrive by car, parking needs were estimated to be 341 parking spaces for cars and an additional five spaces for buses. The cost of developing this parking would be covered by the New London Development Corporation and was not included in the NCGM capital budget. Similarly, appropriate access for service vehicles, including full size tractor trailers, and a loading dock needed to be provided.

Space Allocation

The SMP specified that the Museum would occupy a total of 62,000 Gross Square Feet (GSF), with a net usable area (NSF) of approximately 44,000 NSF. Of the 44,000 NSF, lobbies and retail spaces would make up 13%; exhibit space 50%; theatre spaces 14%; Learning Center spaces 5%; collections work and storage spaces 6%; and administration and building support 13%.

The SMP detailed needs specific to museums that must be designed into the building, such as higher ceiling heights, ranging from 16’ in exhibit areas to 50’+ in theaters, climate control for collections, appropriate built-in systems such as security, A/V, and ability to accept and manipulate large-scale artifacts. During the process of allocating space to these needs, ease of access for visitors, operational adjacencies, access controls, and long-term sustainability should be given priority.

Preliminary Architectural Program

The section concluded with a preliminary architectural program which listed eleven categories of space needs and provided brief descriptions, area needed for each space, and the necessary ceiling height. This program was

meant as the starting place for the detailed Room Book that would fully define the spaces needed for the Museum's activities and experiences.

The SMP also provided a chart showing the different kinds of museum spaces, the learning opportunities they offered, and their associated architectural needs with particular emphasis on natural light. Generally, the chart demonstrates that natural light should be very limited within museum spaces outside of open spaces such as lobbies. Finally, the SMP offered a preliminary inventory of necessary systems within the Museum and their functions, ranging from ambient light control to ticketing systems.

2014 Addendum Summary

The 2014 Addendum reflected the relocation of the Museum to a new site on the waterfront in downtown New London and the development of a concept design for the Museum in 2013 by the architectural firm of Gauchat/Santos.

Gauchat/Santos' Concept

The Gauchat/Santos Concept Design showed a building with two wings connected by an atrium. The north wing would be solid mass "black box" for exhibits, while the south wing, evocative of a ship's prow, would feature glass walls and views of the water and the USCGC *Eagle* when in port. It would include galleries for less sensitive exhibits and substantial events space. The building featured space for outdoor activities on a promenade on the south side, while a gentle ramp brought visitors up to the building, built on a plinth above storm tide levels, to the north.



Adapting to the New Location

The design also envisioned the construction of a new ferry terminal, including a passenger waiting area seating approximately 500 passengers, directly adjacent to the Museum. The ferry terminal was one of several constraints on the new, smaller site, which resulted in downsizing the building from approximately 62,000 GSF to 54,000 GSF. The Museum also faced constraints from the adjacent Amtrak station and associated railroad tracks and the City pier. The Amtrak station posed a particular problem as the tracks cannot be crossed when a train is in the station, which presented a safety and logistical challenges. Planners concluded that a pedestrian bridge was the simplest solution. Taken together, the new site had many challenges. As the addendum stated, “this has become a project in which all of its components need to succeed for any of them to succeed.”

Changes to the Museum’s Program

The 2014 Addendum noted that the concept design, while useful for fundraising, had less detail than the 2008 architectural program, and that significant planning work, including developing an Architectural Room Book, would be necessary to ensure that the new design met the Museum’s needs. The new design reduced the square footage for the museum store, café, and administration, and eliminated the feature theater, simulation center, learning center, and collections center. By removing the learning center, the Museum no longer had a place to easily accommodate school groups. In combination with deleting the learning center, elimination of the feature theater and simulation center changed opportunities for earned revenue. The reduced size of the remaining lecture hall was also unlikely to allow it to produce much revenue. While new event space might balance this, the addendum recommended a market study to confirm that such space was a need within the region and to justify giving over 13% of the available square footage to it.

Critically, the deletion of the collections space divorced the management of Museum collections from the operations of the Museum. Reduced office space also meant that some part of the Museum’s administration would be located off-site.

Recommended Adjustments

The 2014 Addendum recommended the following adjustments to the concept plan: maintaining or increasing “free zone” areas (entry area, museum store, history center, and galleries); at minimum, doubling the size of the retail area, reducing gallery space to 2008 sizes to free up more space for other Museum components, such as at least 1,000 additional SF of administration space, and converting the proposed lecture hall into a flexible space with a wider range of uses. The report also noted the need to provide for school and tour bus parking, providing multiple access points via the pedestrian bridge and the waterfront while at the same time making clear the entry point, and maximizing effective traffic flow and revenue generation through the Museum.

2017 Addendum Summary

The 2017 Addendum responded to a new architectural design developed by the Boston-based firm Payette which was still in development when the 2017 Addendum was completed.

New Architectural Concept

Payette's new concept for the Museum, developed iteratively with the NCGMA and the USCG, reflected some of the Gauchat/Santos concept, including the window filled south wing, but removed the north "black box" wing designated for exhibits and moved the building to a more vertical footprint. The building also increased in size to approximately 83,000 GSF, nearly 20,000 GSF more than in 2008. NCGMA stated that the increase in size was a response to the site, which is so constrained that the Museum could not easily expand after the initial construction phase; therefore NCGMA believed that it would be most economical to add the additional 20,000 SF during initial construction. Payette noted that the building had also increased in size for technical reasons needed to accommodate the building's circulation and mechanical systems.

While the addendum included an updated outline Architectural Program, there is no record that the recommended Architectural Room Book with detailed design criteria for the Museum's needed spaces was ever developed. Further complicating the addendum's ability to assess the functionality of the design, agreed-upon spaces like exhibit maintenance and the Early Learning Center, were not specifically allocated within the design. Instead, it was proposed that they would be developed as part of the exhibit space at a later time.

Critiques of the Design

The architectural design process was apparently moving forward without specific reference to the current or previous space programs included in the SMP. As such, the chapter was more focused on analysis of the Payette schematic design.

The addendum presented several concerns about the visitor experience. One concern was the move to a single point of entry, which would be accessed either from the ground level or the pedestrian bridge. This decision was based on USCG security needs, although the addendum pointed out the challenge of moving all visitors, including groups, through one entrance point. According to the addendum's analysis, the design did not provide for easy visitor circulation and wayfinding, especially in terms of elevator access and access to amenities like coat storage, restrooms, and the museum store. The proposed event space had awkward entry points and was proportioned so that its length was three times its width, making any kind of speaking or media program difficult to present.

Other challenges included insufficient space for support service for the Museum's exhibits and that the building's proposed loading dock did not allow for large vehicles. This could limit the ability to accommodate larger artifacts or accept traveling exhibits. The lack of administrative space was seen as particularly acute. Only about 2,000 SF were devoted to administrative spaces, which was significantly less than what the SMP recommended. The lack of necessary administrative space would be resolved by moving some staff to offices off-site. Further, NCGMA office space needs were not yet known, so it was anticipated that these would also have to be off-site.

The Critical Need for Collaboration

As the architectural design process moved forward to the Design Development phase, the addendum recommended that exhibit designers be brought into the process to work collaboratively with the architect. In

particular, it stressed the need for exhibit designers to weigh in on the amount of glass in the exterior facades because daylight would have a significant impact on the types of artifacts displayed. Similarly, key decision points about infrastructure needed to be made collaboratively to make sure exhibition and other user focused needs would be addressed.

As in 2014, the 2017 Addendum concluded that collaboration must continue between all other principals as well, noting the project remained such that “all of its components need to succeed for any of them to succeed.”

2020 Update

Space Allocation

Payette completed Construction Documents (CD's) and specifications for the Museum in 2019. A space program for the Museum as designed was not available from the architects. The following is the basis for the space allocation:

- (b) (4)
- The Net Usable Area is the amount of space that can be used for Museum purposes.
- The Gross Up areas are the additional spaces needed for the building to function. Gross Up area allocation for the Museum is comprised of corridors, stairs, elevators, mechanical spaces, building core,

(b) (4)

Total NCGM Program	2008 SMP	2014 Addendum	2017 Addendum	a
Net Usable Area in SF	44,170	41,800	50,550	
Gross Up Building SF	17,668	12,500	17,775	
Total Building SF	61,838	54,300	68,325	
Gross Up Percentage	29%	23%	26%	
Off-site Space Needed	—	2,500	4,000	

Table 9. NCGM Historical and Current Program Allocation

(b) (4)

The spaces within the building are designed to be open and flexible, giving the USCG the opportunity to adapt to changing needs. These could include changes to the theater, storage, and work areas for the cafe, storage and work areas for education programs, support spaces for special events (if a special focus on event revenue is deemed desirable), and work areas for staff who can most effectively work on site including exhibit, curatorial, and program staff.

The full space program with a space-by-space comparison between the 2017 Addendum and the building as designed is included at the end of this chapter (Table 11).

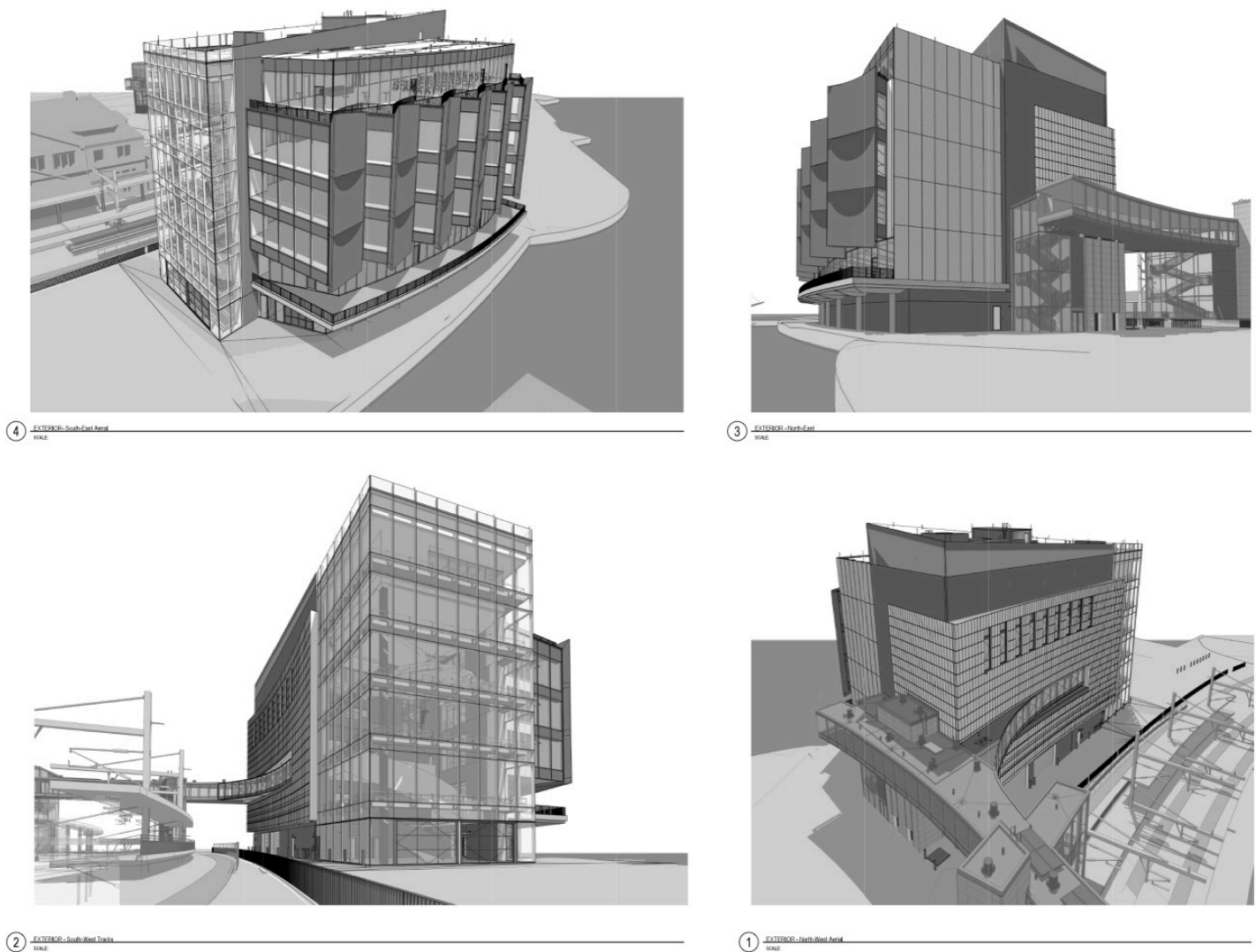


Figure 5. NCGM Architectural Renderings
Source: NCGM Construction Documents, 2019

(b) (4)

NCGM Program Areas	2008 SMP	2014 Addendum	2017 Addendum	(b) (4)
Exhibit Galleries	22,170	26,400	25,425	(b) (4)
Early Learning Center	—	—	1,500	
STEM Center/Classrooms	2,055	—	4,600	
Event Space and Catering	—	5,400	4,355	
Court of Honor	2,400	—	—	
Admin. Space On Site	3,205	1,800	3,415	
CG Live! (Public Space	900	—	—	—
Lecture Hall Seating	75	120	With Theater	—
Feature Theater	5,050	—	3,200	(b) (4)
Feature Theater Seating	150	—	150	(b) (4)
Simulation Center	1,000	—	In STEM Center	
Museum Store/Cafe	1,500	1,400	1,800	

Table 10. NCGM Historical and Current Space Allocation of Program Areas

Outline Space Program

Table 11 compares the full outline of spaces as recommended in the 2017 Addendum with the areas included in the building as designed. Some of the spaces that are not currently provided for will be accommodated in offsite areas. Other spaces, such as the theater green room and/or backstage area may require potential, and in some cases minimal, reconfigurations of the 'as designed' CD's if the USCG or NCGMA wish to incorporate them into the NCGM.

Code	Room Name	Net SF 2017 Addendum	Net SF 2020 (as designed)	Payette Plan ID
A. Exterior Spaces		0	0	Plan ID
A-10	Site Perimeter			
A-11	Perimeter Curb-cuts and Signs	Site	TBD	—
A-12	Sidewalk Systems	Site	TBD	—
A-20	Parking (off-site)			—
A-21	Car Parking (309 spaces + handicapped space)	By others	TBD	—
A-22	Bus Parking (5 spaces)	By others	TBD	—
A-23	Staff & Volunteer Parking (30 Spaces)	By others	TBD	—
<i>Note: A working assumption since 2014 is that the City of New London will provide parking for the Museum's staff and visitors. To date, no funding has been found to build the needed addition to the City's parking garage.</i>				
A-30	Visitor Arrival			—
A-31	Car Passenger Drop-off Area	Site	Train Station	—
A-32	Bus Passenger Drop-off Area	Site	Train Station	—
A-40	Exterior Program Area			—
A-41	Celebration Plaza	By others	None	—
A-42	Volunteer Project Workshop/Shed	Deleted	—	—
A-43	Exterior Exhibit and Program Space	TBD	None	—
A-44	Exterior Exhibit and Program Support Space	Deleted	—	—
A-45	Boardwalk (by New London)	By others	By others	—
A-46	Piers & Wharves (future development)	By others	TBD	—
A-47	Under-building Void	TBD	TBD	—
A-48	Rooftop Exhibit Space	Deleted	—	—
A-49	Memorial Area (on deck outside the Event Center)	TBD	Provided	—

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Code	Room Name	Net SF 2017 Addendum	(b) (4)	Payette Plan ID
B. Entrance Areas		2,660		Plan ID
B-10	General Public Entrance			
B-11	Public Entrance Vestibule & Security Sequence	In gross		
B-12	Group Entrance Vestibule & Security Sequence	TBD		
B-20	Free Zone & Entrance Lobby			
B-21	Main Lobby (half of Payette Plan ID 101)	2,500		101
	- Welcome Center/Tickets and Admission			101
	- Lobby Icon Area			101
	- Visitor Orientation & Reception			101
	- Coast Guard Overview Exhibit			201
	- Registration Kiosk(s)			101
	- Stroller & Wheelchair Parking			
	- Feature Theater Queuing Area			
	- Lobby Storage			
B-22	The Guardian History Center	Deleted		
B-23	Admissions & Cash Room	100		
B-30	Free Zone Amenities			
B-31	Coat Room & Public Lockers	In gross		
B-32	Free Zone Washrooms	In gross		
B-33	Family Washroom/First Aid Room	60		505
B-34	Free-Zone Public Telephone Area	Deleted		
C. The Museum Store and Food Service Areas		2,000		Plan ID
C-10	Retail Area (half of Payette Plan ID 101)			
C-11	Gift store Merchandise and Food Service Area (half of Payette Plan ID 101)	1,800	(b) (4)	101
C-20	Support Areas			
C-21	Manager & Administrative Space	200		
C-22	On-site Stock Storage	Included in C-21		

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Code	Room Name	Net SF 2017 Addendum	Net SF 2020 (as designed)	Payette Plan ID
D. The Cafe		350	0	Plan ID
D-10	Museum Cafe Areas			
D-11	General Cafe Seating	Deleted	Part of Lobby	101
D-12	Exterior Patio Seating (75 seats)	Deleted	---	
D-20	Support Areas			
D-21	Servery/Food Line Area	Deleted	---	
D-22	Cafe Kitchen	Deleted	---	
D-23	Walk-in Refrigerator	Deleted	---	
D-24	Trash Holding Area	Deleted	---	
D-25	Cafe Administrative Space	Deleted	---	
D-30	Concession & Vending Area		(b) (4)	
D-31	Food Service	350		101
D-32	Food Service Storage	Deleted		
E. Feature Theater		3,200		Plan ID
E-10	Theater Lobby & Support Spaces			
E-11	Theater Area Lobby	Part of Lobby		
E-12	Concession Stand	Part of Lobby		
E-13	Theater Lobby Storage	Part of Lobby		
E-14	Theater Exit Lobby	Part of Lobby		
E-15	Theater Area Washrooms	Part of Lobby		
E-20	Feature Theater			
E-21	Sound/Light Lock Entry	100		108A
E-22	Seating & Stage Area (150 seats) [Payette 178 seats]	2,600		108
E-23	Sound/Light Lock Exit	100		108B
E-30	Theater Support Spaces			
E-31	Ushers' Room	Deleted		
E-32	Theater Administrative Space	Deleted		
E-33	Control Booth & Equipment Room	250		112
E-34	Digital 3D Glasses Cleaning Room	Deleted		
E-35	Theater Green Room	150		

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Code	Room Name	Net SF 2017 Addendum	(b) (4)	Payette Plan ID
F. Museum Galleries		26,925		Plan ID
F-10	Gallery Wings (Actual sizes vary)			201, 301, & 401
	- Defenders Wing	4,785		
	- Enforcers Wing	4,785		
	- Protectors Wing	4,785		
	- Champions Wing	4,785		
	- Lifesavers Wing	4,785		
F-20	Changing Exhibit Wing			305
	- Changing Exhibit Gallery	1,500		
	- Exhibition Prep Area	TBD		
	- Exhibition Workshop	TBD		
	- Exhibition Storage	TBD		
F-30	Early Learning Wing			
F-31	Early Learning Center	1,500		
G. Motion Simulator Ride (Venue 3)		0	0	Plan ID
G-10	Simulation Center Lobby/Queue Area			
G-11	Lobby/Queue Area	Deleted	---	
G-20	Simulation Center Lobby/Queue Area			
G-21	Sound/Light Lock Entry	Deleted	---	
G-22	Seating & Stage Area	Deleted	---	
G-23	Sound/Light Lock Exit	Deleted	---	
G-30	Simulation Center Support Spaces			
G-31	Control Booth & Equipment Room	Deleted	---	
H. STEM Center		4,600	(b) (4)	Plan ID
H-10	Common Spaces			
H-11	Command: Group Orientation & Lunch Room	1,200		521
H-12	Group Storage Area	300		
H-13	Food Vending Area	See D-31		
H-20	Education Labs (Briefing Room)			

Code	Room Name	Net SF 2017 Addendum	(b) (4)	Payette Plan ID
H-21	Program Lab 1	600		523
H-22	Program Lab 2	500		
H-23	Program Lab 3	400		
H-24	Program Lab 4	300		
H-25	Program Lab 5	200		
H-30	Simulator Labs			
H-31	Simulator Lab 1	200		522
H-32	Simulator Lab 2	200		
H-33	Simulator Lab 3	200		
H-34	Simulator Lab 4	200		
H-35	Simulator Lab 5	200		
H-40	Learning Center Support Spaces			
H-41	Operative Support	100		
H-42	Washrooms	In gross		
I. Collections Center		400		Plan ID
I-10	Collections Work Area		(b) (4)	
I-11	Clean Work Area	400		
	<i>Also see offsite areas, below</i>			

J.

(b) (5)

(b) (5)

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Code	Room Name	Net SF 2017 Addendum	Net SF 2020 (as designed)	Payette Plan ID
	- Volunteer Manager (docent training)	75		
	- Procurement Liaison	50		
	- Accounting Clerk/Bookkeeper III	50		
	- Community Liaison Assistant	50		
	- Web and Social Media	50		
	- Visitor Services Administrative Assistant	50		
	- Education Specialist: Programs	75		
	- Education Assistant: Programs	75		
	- Storekeeper (military 2)	50		
	- Public Affairs Officer (military 3)	50		
	- Yeoman (military 4)	50		
J-20	Enclosed Administrative Spaces			
J-21	Museum Director	150		
J-22	Flexible Office (visiting officers, Association...)	150		
J-21	Enclosed Administrative Spaces			
J-23	Museum Director	150		
J-26	Visitor Services and Events Manager	100		
J-27	Command Silver Badge (military 1)	100		
J-28	SR Accountant Liaison to USCG Headquarters	100		
J-29	Community Liaison and Public Relations	100		
J-30	Information Technology Manager	100		
J-31	Director Exhibits & Programs	100		
J-32	Office Space	Deleted		
J-33	Office Space	Deleted		
J-40	General Service Areas			
J-41	Board/Conference Room	500		
J-42	Staff, Docent & Volunteer Lounge & Kitchenette	400	(b) (4)	506
J-50	Administrative Support Spaces			
J-51	Mail, Equipment, Supply & Storage Room	250		
J-52	Local Administrative Storage	100		
J-53	Management Information Services	See J-30		
J-54	Dedicated Administrative Washrooms	In gross		

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Code	Room Name	Net SF 2017 Addendum	Net SF 2020 (b) (4)	Payette Plan ID
K. Event Center		4,355		Plan ID
K-10	Public Space			
K-11	Multipurpose Event Space	3,500		501
K-20	Support Spaces	TBD		
K-21	Kitchen	480		508
K-22	Table/Chair Storage	375		509
L. The Building Support Areas		2,895		Plan ID
L-10	Building Support Spaces			
L-11	Janitorial & Facility Support	125		
L-12	Staff Washrooms	In gross		
L-13	Maintenance Administrative Offices and Work Areas	750		
L-14	Maintenance Shop	500		
L-15	Equipment Parking	In gross		
L-16	Building Control and IT Server Rooms	220		
L-17	Security Room	100		105
L-18	Freight Elevator	In gross		
L-19	Passenger Elevators	In gross		
L-20	Loading Support Areas			
L-21	Loading Dock	700		00
L-22	Shipping, Receiving & Crate Storage Area	500		
Z Unused Z. Unused Deck 0 Area				
Total Net Museum Area (NSF)		50,610	(b) (4)	
M. Gross-up Areas		17,775		
M-11	Passenger Elevators (2)	1,000		
M-12	Stair 1	1,125		
M-13	Stair 2	1,350		
M-14	Circulation	2,400		
M-15	Restrooms	2,600		

Code	Room Name	Net SF 2017 Addendum	Net SF 2020 (as designed)	Payette Plan ID	
M-16	Freight Elevator	1,500	(b) (4)		
M-17	Mechanical/Utility	7,800			
Total Gross Museum Area (GSF)		68,385			
Grossing Factor		26%			
Offsite and Exterior Areas					
F-40	Off-site Exhibition Storage	—			
J-60	Off-Site Administrative Spaces				
J-61	Off-site museum administrative support spaces	1,000		—	
J-62	Off-site museum store storage	1,000		—	
J-63	Off-site museum storage	2,000		—	
I-20	Collections Storage				
I-21	Working Collections Storage (at Academy?)	2,000		—	
I-30	Collections Administrative Space				
I-31	Curator of Exhibits & Collections	120		—	
I-32	Museum/Collections Technician	100		—	
Total Offsite areas		6,220			

Table 11 - NCGM 2017 Addendum and Current Detail Space Program Comparison

Table 11. NCGM 2017 Addendum and Current Detail Space Program Comparison

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CHAPTER 21: MEMBERSHIP PROGRAMS

2008 Strategic Master Plan Summary

The SMP envisioned a membership program that would allow the Museum to develop relationships with individuals and corporations to ensure ongoing financial support for the Museum. There would be three different types of memberships: individual, corporate, and the Guardian History Center. Since the Museum would be free to the public, it could not offer a typical perk of membership—free admittance. Instead, the SMP recommended offering discounts on the Feature Theater, museum store, café, and function rentals, as well as special members-only previews and events like behind the scenes tours or receptions with the director. For corporate members, there might be special “VIP” opportunities for the CEO, as well as reduced-cost function rentals, and free passes to the theatre that could be disturbed to employees. Recognizing members through newsletters and displays onsite was an important aspect of both membership programs. Launching the membership program would require developing a business plan, careful coordination with local supporters and media, as well as hiring dedicated membership staff.

Typically, members make up 1.5-3% of onsite museum visitors, but given that entrance was already free, the plan estimated that .5% of visitors would become members, resulting in an average of 1,148 yearly members and \$57,420 in revenue. Corporate memberships would also be relatively modest, focusing on companies in the greater New London area, recognizing that the NCGMA would also be soliciting for funds. The SMP anticipated that 5-10 companies would become corporate members, generating \$2,500-\$5,000 in revenue. In addition, the SMP provided tables listing prices and membership numbers for similar membership programs at military and regional museums for comparison purposes.

A separate membership program supported the Guardian History Center, a place for former service members and their families to log their information and reconnect with others they served with. The SMP forecasted that interest in this service would be high for the first years of operation and then decrease from a high of 5,000 members/\$250,000 in revenue in 2013 (first year of opening) to 1,500/\$75,000 in revenue in 2017 (fourth year of opening).

2014 Addendum Summary

Updates to Chapter 21 were included in the updates to the 5-year operating profile in the 2014 Addendum. Please see Chapter 24 for details.

2017 Addendum Summary

By the 2017 Addendum, a membership program was no longer part of the plan. The program was likely eliminated because of changes which make typical perks of membership like free admission and discounts on programs less feasible.

2020 Update

The NCGMA has instituted a “Plankowner” program for individuals who agree to give a monthly donation until construction of the Museum is complete. At this time, NCGMA is interesting in considering how the participants in the “Plankowner” program might become the first group of members at the Museum. The NCGMA sees membership as an important source of income to support programs once the Museum is open.

CHAPTER 22: MARKETING STRATEGIES

2008 Strategic Master Plan Summary

The SMP outlined four broad marketing objectives:

- consumer marketing
- marketing to other service customers
- fundraising support
- community relations

Each of these would be primarily managed by the NCGMA, with some assistance by the Museum. The marketing plan should focus on building public awareness of the Museum, analyzing audience interests, defining specific communications campaigns, and building community relationships.

The objectives were meant to be refined in a plan written two years before the Museum's opening date. Until then, the SMP outlined a series of marketing strategies that could be used to build towards the larger plan. These included communicating the Museum's mission, planning a successful opening, and getting promotional support from major sponsors. More specific strategies included how to market both education and entertaining experiences, reaching out to audiences already engaged with the Coast Guard, developing programming with market segments in mind, and promoting the accessibility of the Museum by car.

The SMP broke down the specific information that marketing for the Museum should convey into three categories:

- key messages
- promises
- ideal visitor reactions

The key messages emphasized the variety of audiences that would be served by the Museum and the range of experiences that the Museum offered. The chief promise is also experience-based - that visitors will have a good time while still experiencing educational content and contributing to a good cause through their visit. The ideal visitor reactions mirror the promises, but also highlight the appeal of the technological elements of the Museum.

2014 Addendum Summary

This chapter was not updated in 2014.

2017 Addendum Summary

The 2017 Addendum kept much of the material from the SMP but in several places shifted the focus more toward how the NCGM would promote the Coast Guard rather than how it would promote itself. The addendum emphasized the NCGM's position as the USCG's public face and increased the focus on building awareness of the USCG.

The addendum more clearly defined the roles that the USCG and the NCGMA would take in the Museum's marketing. USCG personnel could follow the steps outlined in the chapter to promote the Museum as a whole, but any marketing for revenue-producing areas of the Museum would be managed by the NCGMA. Marketing by the NCGMA would help them reach revenue targets and assist in their fundraising efforts.

The branding processes, key messages, promises and ideal visitor reactions sections were not substantially updated.

Recommendations

The marketing strategies as updated in the 2017 Addendum remain well thought out and should provide a preliminary roadmap for developing a detailed marketing and public relations plan for the NCGM as the opening date nears.

CHAPTER 23: STAFFING

2008 Strategic Master Plan Summary

Organizational Structure

The Museum staffing model in the SMP called for the majority of the Museum's functions to be staffed by USCG civilian employees and for the NCGMA staff to run revenue producing areas only. Each organization would be responsible for their own hiring, which would include a mixture of full-time and permanent part-time staff as well as temporary or contract staff. The Museum director, hired by the USCG, would manage four departments: Visitor Experience, Facilities and Security, Community Liaison, and Accounting and Human Resources. It was expected that all services would be in-house, though there was potential to outsource security and groundskeeping. The new staff would not include members of the USCG History office.

The President of the NCGMA would work closely with the Museum director to oversee all aspects of revenue generating activities, which included theater venues, admission cashiers, membership, museum store, function rentals, and café. The NCGMA's Director of Finance and Enterprise would oversee the day-to-day operation of these activities. While the NCGMA had split off from the US Coast Guard Foundation in 2001, it was anticipated that the two organizations would continue to share four positions including Director of External Relations Development/Annual Giving, Assistant/Data Entry, Director of Advancement and Marketing, and Executive Assistant to the President.

The SMP included an organization chart for both the USCG and the NCGMA, showing connections between the organizations and recommending future positions. Based on the org chart, salary tables were provided for both organizations. The USCG salaries used the GS scale for the Hartford-Willimantic, CT area. For budgeting purposes, each position was assumed to be step 5. NCGMA salaries were based on 990 tax returns from similar organizations in Connecticut. Benefits were assumed to be 26% for all full-time employees. Each organization would handle their own payroll. In total, the USCG would employ 22.4 FTEs civilian employees and the NCGMA 11.8 FTEs, for a total of 34.2 FTEs. This level of staffing was somewhat below museum industry standards of FTE to visitor ratios, indicating that the Museum may find it necessary to expand its staff.

Hiring Timelines

The SMP also provided a timeline for hiring staff prior to opening day. These costs would be covered by the pre-opening costs in the NCGMA's capital budget while the USCG expected to cover their staffing costs through their own budget. Early hires for the NCGMA would include a President, would be tasked with fundraising, budget management, and beginning exhibit and program development. Exhibit and program development would require close coordination with the USCG, as the USCG held the collections needed for exhibits and would ultimately be managing the exhibits and programs. On the USCG side, the SMP recommended hiring a director immediately as a long-term, non-rotating position. The director would provide necessary continuity for the project and serve as main liaison to the NCGMA. It was assumed that the current CGA museum curator would

serve as curator to the NCGM, so hiring additional curators could be deferred. Total pre-opening salary costs were expected to be approximately \$2M for the USCG and \$3.7M for the NCGMA.

2014 Addendum Summary

By 2014, the NCGMA determined that they would contract out the operation of the museum store, cafe, function rentals, and catering. The change of location eliminated several program spaces and the opportunity for paid theater programs. As a result, the NCGMA's staffing needs, ranging from theater ushers to director of enterprise, were significantly reduced. In addition, the NCGMA would no longer share staff positions with the Coast Guard Foundation. The Director of External Relations and Development and the Director of Advancement and Marketing were eliminated; the NCGMA chose to hire their own data entry assistant and executive assistant to the President. Projections for the USCG's operating staff remained largely the same, though a web and social media position was added. It was also expected that additional, contracted security guards and grounds staff would be necessary to accommodate increased visitation at the new site. The 2014 Addendum continued to assume the curator of the CGA museum would fill the curator position at the NCGM and that the Coast Guard history office would remain independent. Updated organization charts were provided.

Updated Salary Projections

The addendum updated the salary charts from 2008 using the 2013 federal pay scale and other data. Benefits remained at 26% for full-time employees. Based on the changes outlined above, the USCG would employ 24.75 FTEs, a slight increase accounted for by the addition security and facility staff. The NCGMA would now employ 4.0 FTEs, a decrease of about 7 FTEs. The addendum stated that there were very few program staff, and no marketing or development staff, as would be typical to most museums. To address potential program staff shortages in the first years of opening when attendance was expected to be higher, funds for contract staff were added to certain departmental budgets. Total operating staff costs were calculated at \$1.7M for the USCG, and \$338,000 for the NCGMA. Pre-opening staff costs also adjusted accordingly.

Off-Site Offices and Administrative Areas

Despite the reductions in staff, the new building design did not have adequate space for staff offices. Even before accounting for supplies, copiers, meeting areas, kitchenette and other support spaces, there was already a shortage of space. Because of this, the 2014 Addendum added a line in the operating budget to lease off-site office space for some staff.

2017 Addendum Summary

The 2017 Addendum did not include NCGMA staff, though it anticipated that the division of responsibilities between the organizations would remain the same. There were several changes to the plan for USCG staff. First, the USCG added four enlisted members to the Museum staff to serve unspecified, public facing roles. Second, a Deputy Director would manage day-to-day operations, freeing up the Director to manage external affairs, outreach, and partnerships.

New Programs and New Staff

Day-to-day operations were now more expansive with the reintroduction of the theater and the addition of the STEM Learning Center. With these changes, additional education and visitor services staff were added. The addendum added a procurement specialist based on a recommendation from the Marine Corps Museum. Contract security, IT, custodial and grounds keeping services, as well as seasonal gallery staff would supplement the permanent staff. Volunteers were also expected to play an important role; the addendum forecast engaging an average of 50 active volunteers each year. As in previous organization charts, the updated organization chart kept the existing Historian's Office independent of the Museum, though the curator at the CGA's museum would move to the NCGM.

The addendum updated the salary chart using federal pay scales, but now calculated salaries based on step 10 instead of step 5. The addition of the positions above meant that the Museum now had 28.4 civilian FTEs and 4.0 military FTEs. These changes caused a significant increase in salary costs, to a total of just over \$3M. Given the anticipated seasonality of the Museum, the addendum recommended finding ways to reduce staffing in the winter or to assign staff other roles to make the most of staff time and capabilities.

The chapter concluded on a positive note that now there was sufficient office space for all of the staff outlined, though it did not explain where the additional space had come from. Moving all staff onsite would not only save the cost of leased office space, but also promote better cooperation amongst the staff.

2020 Update

The positions outlined in the 2017 Addendum are in line with the programs and activities currently proposed for the Museum. The organization chart has been updated (Figure 6). The general pre-opening hiring plan for staff is also generally in line with an orderly ramping up of staff, with the expectation that new leadership may adjust the hiring schedule as plans and programs become more concrete or circumstances change. Below are updated staffing tables that include 2021 federal pay scales. As salary tables and organization charts for the NCGMA were not provided in 2017, these are not included in this update.

It is assumed that NCGMA staff will manage the contracting of revenue generating activities. NCGMA's offices will also be located off-site, perhaps in a facility shared with the majority of the Museum's administrative staff. The contractor for the museum store, event rentals, and any fee-based STEM Center activities will need administrative space in the Museum.

Updated USCG Staff List and Projected Salaries

Table 12 updates table 23.3 included in the 2017 Addendum with revised positions and salaries based on current GSA grades at step 10 plus a 26% fringe benefit rate.

Title	Rank/ Grade	Status	FTE's	Funding Source	Base 2021 GS Rate	GSA Rate with 26% Fringe
Administration						
Museum Director	GS 15	FT Perm	1	Civilian	172,500	217,350
Director's Executive Assistant	GS 6	FT Perm	1	Civilian	57,070	71,908
Deputy Director	GS 14	FT Perm	1	Civilian	158,078	199,178
Assistant to the Deputy Director	GS 6	FT Perm	1	Civilian	57,070	71,908
SR Accountant Liaison to USCG Hdqtrs	GS 12	FT Perm	1	Civilian	112,502	141,753
Purchasing Agent	GS 9	FT Perm	1	Civilian	77,574	97,743
Accounting Clerk	GS 9	FT Perm	0.5	Civilian	77,574	48,872
Military 2 Storekeeper	E-5	FT Perm	1	Military		92,250
Community Liaison and Public Relations	GS 12	FT Perm	1	Civilian	112,502	141,753
Community Liaison Assistant	GS 6	PT Perm	0.5	Civilian	57,070	35,954
Web and Social Media Assistant	GS 7	FT Perm	1	Civilian	63,422	79,912
Military 3 Public Affairs Officer	E-5	FT Perm	1	Military		92,250
Military 4 Yeoman	E-5	FT Perm	1	Military		92,250
Director of NCGM Facilities/Security	GS 13	FT Perm	1	Civilian	133,775	168,557
Security Specialist	GS 12	FT Perm	1	Civilian	112,502	141,753
Facility Maintenance Engineer/Supervisor	GS 9	FT Perm	1	Civilian	77,574	97,743
Facilities Technician – Engineer	GS 7	FT Perm	1	Civilian	63,422	79,912
Information Technology Manager	GS 12	FT Perm	1	Civilian	112,502	141,753
Security Staff		Contract				
Custodians/Groundskeepers		Contract				
Military 1 Command Silver Badge	E-9	FT Perm	1	Military		\$146,316
Subtotal – Administration			18	FTEs	\$1,445,137	\$2,159,113
Exhibits and Programs						
Director Exhibits & Programs	GS 13	FT Perm	1	Civilian	\$133,775	168,557
Administrative Assistant	GS 5	FT Perm	1	Civilian	51,200	64,512
Museum Curator	GS 12	FT Perm	1	Civilian	112,502	141,753
Museum /Collections Technician	GS 9	FT Perm	1	Civilian	77,574	97,743
Exhibit Maint./Changeover Tech	GS 7	FT Perm	1	Civilian	63,422	79,912
Education Specialist: Programs	GS 12	FT Perm	1	Civilian	112,502	141,753
Visitor Services and Events Manager	GS 9	FT Perm	1	Civilian	77,574	97,743
Visitor Services Assistant	GS 7	FT Perm	1	Civilian	63,422	79,912
Volunteer Manager (docent training)	GS 7	FT Perm	1	Civilian	63,422	79,912
Volunteer Docents	—	Volunteers		Civilian		0
Gallery Interpreters/Greeters/Floor Staff	GS 3	PT Perm	5.4	Civilian	40,762	277,345
Gallery Interpreters/Greeters/Floor Summer		Contract				
Subtotal Exhibits, Programs, And Military			14.4	FTEs	\$796,155	\$1,229,140
Total 2021 Projected Staffing			32.4	FTEs	\$2,241,292	\$3,388,253

Table 12. Updated NCGM Staff and Projected Salaries

Preliminary Organizational Chart

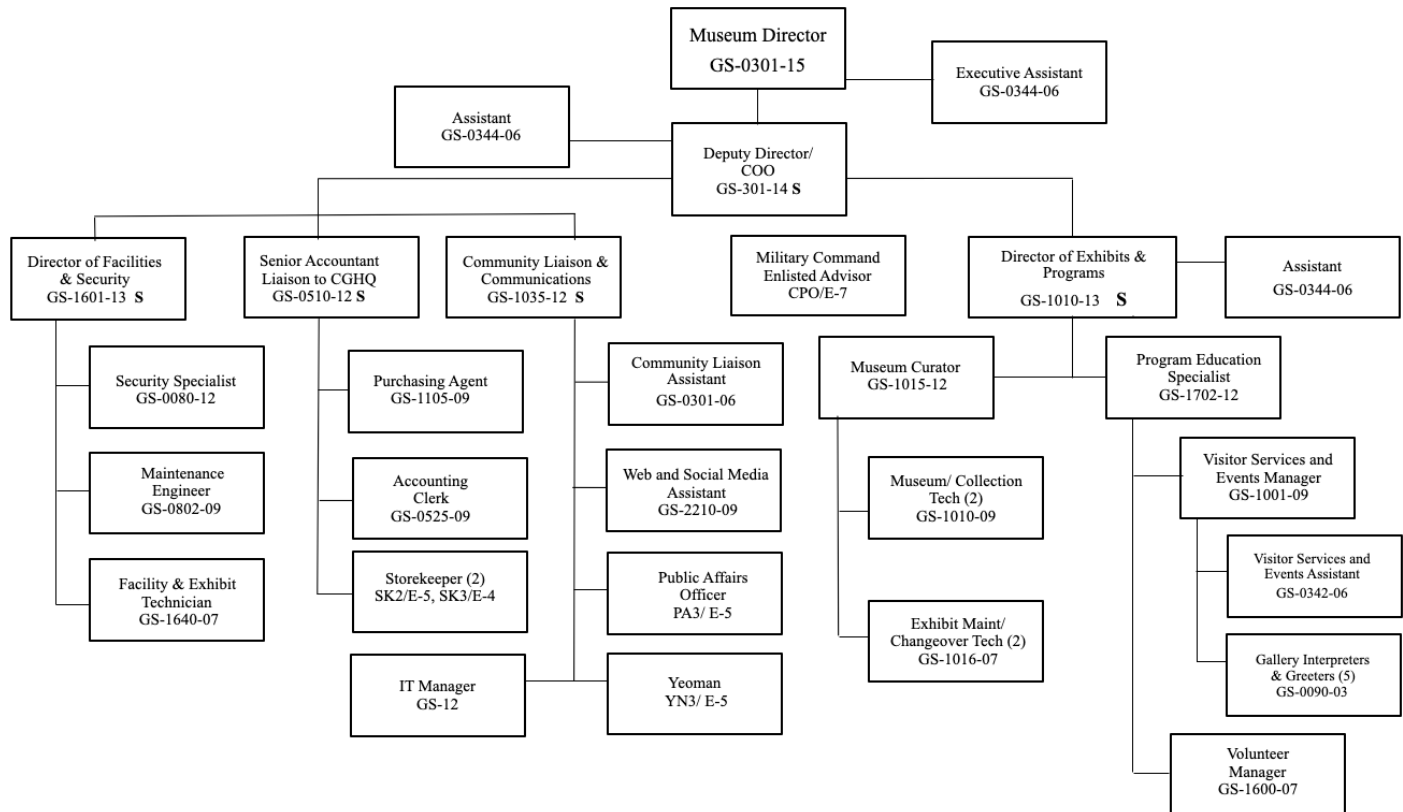


Figure 6. NCGM Preliminary Organizational Chart

Updated Pre-Opening Staff Hiring Dates and Salaries

As noted in the 2017 Addendum, all staff will need to be on board before opening day. Table 13, an update of the 2017 Addendum table 23.6, outlines a preliminary approach to Museum hiring based on a proposed opening day in late 2024. Actual hiring will depend on specific needs and availability of funding.

	Title	FTE's	Approx. Start Date	Mos. Pre Opening	Monthly Rate	Total Pre-Opening
2021	Museum Director	1	7/31/19	66	18,113	869,400
	Director's Executive Assistant	1	7/20/21	42	5,992	251,679
	Purchasing Agent	1	7/20/21	42	8,145	342,101
	Accounting Clerk	0.5	7/20/21	42	4,073	171,051
	Community Liaison and Public Relations	1	7/20/21	42	11,813	496,134
	Director Exhibits & Programs	1	7/20/21	42	14,046	589,948
2022	Deputy Director	1	7/15/22	30	16,598	497,946
	Sr Accountant Liaison to USCG Hdqtrs	1	7/15/22	30	11,813	354,381
	Museum Curator	1	7/15/22	30	11,813	354,381
	Web and Social Media Assistant	1	7/15/22	30	6,659	199,779
	Director of NCGM Facilities/Security	1	7/15/22	30	14,046	421,391
	Assistant to the Deputy Director	1	7/15/22	30	5,992	179,771
	Education Specialist: Programs	1	7/15/22	30	11,813	354,381
2023	Security Specialist	1	7/10/23	18	11,813	212,629
	Museum /Collections Technician	1	7/10/23	18	8,145	146,615
	Facility Maintenance Engineer/Supervisor	1	7/10/23	18	8,145	146,615
	Community Liaison Assistant	0.5	7/10/23	18	2,996	53,931
	Information Technology Manager	1	7/10/23	18	11,813	212,629
	Administrative Assistant	1	7/10/23	18	5,376	96,768
2024	Visitor Services and Events Manager	1	5/5/24	8	8,145	65,162
	Exhibit Maint./Changeover Tech	1	5/5/24	8	6,659	53,274
	Facilities Technician - Engineer	1	5/5/24	8	6,659	53,274
	Visitor Services Assistant	1	5/5/24	8	6,659	53,274
	Volunteer Manager (docent training)	1	5/5/24	8	6,659	53,274
	Military 2 Storekeeper	1	10/2/24	3	7,688	23,063
	Military 3 Public Affairs Officer	1	10/2/24	3	7,688	23,063
	Military 4 Yeoman	1	10/2/24	3	7,688	23,063
	Military 1 Command Silver Badge	1	10/2/24	3	12,193	36,579
	Gallery Interpreters/Greeters/Floor Staff	5.4	10/2/24	3	23,112	69,336
Total Pre-Opening		32.4				6,404,892

Table 13. NCGM Pre-Opening Staff Hiring Dates and Salaries

Pre-Opening Salary Costs and Other Expenses

Table 14 outlines an estimate of pre-opening salary and administrative costs for each year prior to opening as additional staff are brought on board. Pre-opening expenses include office space rental (not yet identified) and other typical administrative overhead.

	2021	2022	2023	2024	Total
Cumulative FTEs	5.5	12.5	19.0	32.4	
Salary Cost	\$481,766	\$1,218,588	\$1,980,723	\$2,723,815	\$6,404,892
Admin Expenses	144,530	365,576	594,217	817,144	1,921,468
Totals	\$626,296	\$1,584,165	\$2,574,940	\$3,540,959	\$8,326,360

Notes:

-Salary costs increase each year as more staff are hired.

-Administrative expenses are calculated as 30% of salary cost. These include pre-opening office space and other staff support and office expenses.

Table 14. NCGM Pre-Opening Salary Costs and Other Expenses

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CHAPTER 24: FIVE YEAR OPERATING PROFILE

2008 Strategic Master Plan Summary

The SMP recognized that the NCGM and the NCGMA were separate organizations with independent budgets, and that their budget choices would nonetheless impact the other because of the interwoven nature of their missions. The operation of many Museum functions would come from the USCG's budget; the NCGMA was to operate revenue generating portions of the Museum as well as continue to fundraise to provide supplemental operating money and grow the endowment. The organizations would work together to manage administrative tasks, community relations, exhibits, theaters, free programs visitor services, volunteers, facility and grounds, and special events. The NCGMA would be solely responsible for earned revenue, including marketing, feature theater and simulator, membership, development, function rentals, gift shop, care, special events, and the endowment.

Earned Revenue

The SMP estimated that the NCGMA would earn an average of \$459,060 in theater ticket sales, and \$139,904 in simulator ticket sales. This assumed that approximately 40% of visitors would see the film, and 20% of visitors would use the simulator. Additional revenue described in Chapter 17 (retail) would also support the Museum. After Year 5, fee-based programs could also be introduced to bring in more revenue. In total, earned revenue would make up about 20% of revenue. This was reasonable for a museum with free admission; generally, museums earn less than 50% of their total revenue.

All revenue would be in the NCGMA budget, which was expected to produce a net revenue of \$140,000 or more during each of the first five years of operation. The SMP recommend that net revenue go to support the exhibit fund, one-time capital costs, or be reinvested in the endowment. The core Museum activities would not produce revenue; instead, the USCG would manage Museum operations as part of the USCG's budget. Depending on the NCGMA's success, their net revenues could decrease the need for the USCG to appropriate funds for facility maintenance, repair, and improvement. In a stable year, expenses for the USCG would be \$2.7M and \$1.3 for the NCGMA, for a combined budget of \$4.0M. This combined budget allowed the SMP to compare expenses and revenue with that of science centers, which the SMP considered most similar to the planned Museum. Generally, the Museum's budget numbers correlated with the averages for comparably sized science museums.

2014 Addendum Summary

The 2014 Addendum for Chapter 24 combined updates for Chapter 16 (Principal Operating Assumption) and Chapter 21 (Membership Programs) with the updates for Chapter 24.

USCG and NCGMA Relationship

The division of responsibilities between the USCG and NCGMA had not changed since 2008, although now there was uncertainty if the NCGMA would become the non-profit managing earned revenue after the completion of the Museum. Recognizing that the USCG could not organize or manage revenue generating activities, the

addendum assumed that while it may not be the NCGMA as then currently organized, there would be a non-profit organization that would manage revenue producing activities for the Museum.

Changes Due to the New Site

Based on the new site, the 2014 Addendum revisited operating hours and peak Design Day calculations. The downtown, waterfront site was expected to attract more tourists and concentrate visitation into the summer months, though the spring would still be busy with school groups. Operating hours did not change. Based on this information, the Design Day remained a Saturday in August, when the Museum would need to accommodate 2,468 visitors in one day, with as many as 658 moving through the Museum each hour. Between visitors and staff, 324 parking spaces would be necessary. While the Museum was across the street from a 940-space public parking garage, the addendum noted that this garage also served the Cross Sound Ferry, which also experiences peak use on weekends in the summer months. The addendum recommended that the Museum work closely with the Cross Sound Ferry to develop strategies, including shuttle service, to meet their combined parking needs.

Revenue Impacts

Changes to the site and building had important budget impacts. With the elimination of the Learning Center, Feature Theater, and Simulator and reduction in size of the museum store and café, there would be much less earned revenue. In 2014, the NCGMA intended to contract out these services, meaning that even less of the revenue would return to the Museum. The NCGMA would still manage a membership program, but with the elimination of the Coast Guard Court of Honor and space for programs, including the ticketed theater, there were fewer financial incentives for membership. As such, membership was expected to decrease. Rentals of the new event space with striking views of the river might make up some of this decreased income, but not all of it. In total, earned revenue dropped from the 20% of overall revenue projected in 2008 to about 5%. In dollar amounts, the NCGMA was anticipated to net about \$83,000 in a stable year, along with about \$30,000 from the endowment. Together, these factors meant that the Museum would see much less financial support from the NCGMA than had been expected in 2008.

Expense Impacts

The 2014 Addendum provided budgets for both the NCGMA and the USCG, based on staffing, revenue, Museum components, and anticipated attendance described in previous chapters. Annual expenses for the USCG would be \$3.1M and \$659,000 for the NCGMA in a stable year of operations. Combined, the budget would be about \$3.8M, a reduction from \$4.3M in 2008. The reduction was most attributable to the NCGMA contracting out more services. In fact, the USCG's budget increased because it was taking on more facility management and because the smaller size of the building added costs. For example, insufficient space for staff and collections meant that off-site spaces would need to be leased to accommodate these activities. Exhibit and facility renewal costs were not considered as part of this budget. The addendum expected that these costs would be covered by the NCGMA from their net income. The three budgets developed in 2008 (USCG, NCGMA, and a combined budget) were updated to reflect 2013 dollars and these changes.

Museum Comparisons

The chapter closed by comparing the budgets to other military museums and science centers. Expense per visitor of \$16.03 were on par with three other military museums, though since this data ranged from \$8.94-\$26.52 per visitor, it was hard to draw many conclusions. The USCG's cost per visitor were somewhat lower than the average for science centers, probably because of how net revenues were calculated, fewer staff, and because Museum program activities were minimal. The USCG's building costs were higher per SF than both science centers and other military museums, which could be attributed to the building's design, especially the glass which would be expensive to maintain, and the constrained site which increased construction costs, while limiting the size of the building and corresponding economies of scale.

2017 Addendum Summary

USCG and NCGMA Relationship

The 2017 Addendum began by recognizing that the NCGMA would not be providing long-term support for renewal or Museum improvements after opening, though they would manage special programs ("margin of excellence") with revenue generating potential. As such, the areas of responsibility were adjusted so that the USCG managed administration, communication and public relations, programs, events, exhibits, education, volunteers, visitor services, facility, grounds, and security; the NCGMA would manage development, marketing, margin of excellence programs and hold contracts for the management of special events, gift shop, food service, function rentals, and catering.

New Building Design

The building design had also changed, impacting operations in a number of ways. First, there appeared to be sufficient administrative space on-site, eliminating the need to rent off-space site. While exhibit space had shrunk by about 1,000 SF, there was now space for an Early Learning Center, the Feature Theater, and a new space for the STEM Center, which would also include a simulation experience. On balance, these changes were projected to improve the visitor's experience.

Operating hours and seasons also shifted, to be open more days with more hours, although the basic assumptions about visitation patterns did not change. Based on these operating hours, the addendum made recommendations on the number of staff including interpreters, security, custodial, and others needed for smooth operations. A detailed explanation of staffing is provided in Chapter 23.

Five Year Operating Budget

The five-year operating budget made the following assumptions:

- Opening day would be May 20, 2022, resulting in a stable operating year in 2025.
- The Museum would be funded through the USCG's budget and would not operate as a 501(c)3.
- Any earned revenue would be generated and managed by the NCGMA.
- Levels of attendance, staffing, facility maintenance, and capital budget described in previous chapters would stay largely the same. For budget purposes, the addendum recommended using a 292,000 as a visitation number, the attendance in year 4, the first stable year, and a 15% decrease from the figure listed in Chapter 14.

- Debt carried over from the capital campaign would not be taken over by the USCG.
- Recurring facility maintenance and modest change to exhibits would be included in the budget.
- Major building repairs and exhibit renewal would be funded outside of the operating budget.

The five-year operating budget ranged from \$5.9M to \$6.2M; \$6.2M was considered the figure for a stable operating year, which was an increase from 2014. The increase mainly came from an increase of 14,000 GSF in the building, increased utility costs based on USCG guidelines, increase in staffing and a new method for estimating salary costs, and expenses incurred with the reintroduction of a signature film and classroom space. In addition to the five-year operating budget, the addendum recommended developing additional budgets for exhibit renewal as well as building life cycle costs, which could reach \$70 million over the course of fifty years.

Peer Comparison

The chapter closed with a comparison to peers, which still included science centers as well as military museums. Generally, the Museum fit into average budget and operating figures of similarly sized science centers. The Museum had lower staffing levels, but this could be explained by the number of services like security and custodial that were contracted out. The addendum emphasized the importance and size of contributions to the other military museums; the federal appropriation did not cover all needed expenses. Finally, the addendum recommended that the budget be regularly updated as building design as finalized. If attendance figures were lower than projected, staffing levels should decrease.

2020 Update

Architectural Changes

The design of the new building as it evolved resulted in significant changes to the Museum's planned program spaces including:

- Reduction of exhibition area by about 10%.
- Integration of the Early Learning Center as part of the STEM Center.
- Reduction of the STEM Center to less than half its previously proposed size.
- Reduction of the Administrative area (necessitating off-site office areas for some staff).
- Increase in the Event Center by 20%.
- Reduction in building support space to half its previously proposed size.

While significant, these changes have not precipitated any substantial impact to the Museum's projected operating budget. (See Chapter 20 for a detailed analysis of the architectural changes)

The STEM Center has been seen as a potential revenue generating program for the NCGMA. Any income or expenses associated with programs there would be in the NCGMA budget.

Operating Budget

Programmatic and operational assumptions and realities impacting the operating budget have changed little since 2017. The budget remains reasonably accurate for a museum at this stage of planning and development. The updated budget (Table 15) reflects 2% inflation for the years since the addendum and prior to the projected opening (2017-2025) and then an overall 3% for each of the following five years. A core assumption is that the

Museum's operations will primarily be funded by the Coast Guard with appropriated funds. Any revenue generating activities, as allowed by legislation, such as the museum store and event center, will be managed by the NCGMA or a contractor and have not been included in this budget.

As was the practice with previous addenda, the operational budget does not include periodic capital items such as new furnaces, roofing, exhibit refreshes, and the like. These would be funded through separate capital allocations or with support from the NCGMA. This budget also does not include revenues or expenses for NCGMA operations and programs. The current objective of the NCGMA is to fund and manage construction of the Museum building. The scope, nature, and funding for future NCGMA associated programming after opening is still under development.

		Opening Year 1	Year 2	Year 3	Stable Year Year 4	Year 5
On-Site Attendance		287,500	275,000	262,500	250,000	257,500
Salaries and Benefits	52%	\$3,459,391	\$3,563,173	\$3,670,068	\$3,780,170	\$3,893,576
<i>See Chapter 23. Inflated to 2025 at 2% annually and then Increasing at 3% each year after the Museum's opening.</i>						
Visitor Services & Programs	5%					
Exhibits and Programs		188,270	309,161	430,871	400,886	402,687
Theater Programs		28,258	41,711	42,545	43,396	44,264
Visitor Services		107,287	98,739	94,739	109,494	107,270
Overhead & Support	43%					
Admin & Finance		54,965	58,934	60,113	61,315	62,542
Information Services		166,559	202,170	206,213	232,279	214,544
Director's Office		63,407	64,207	65,491	66,801	68,137
Deputy Director's Office		39,285	38,430	39,199	39,983	40,783
Community Relations		250,586	204,455	208,544	230,695	235,309
Off-site Offices and Storage		149,074	150,650	152,229	153,810	155,394
Security (contracted)		1,251,908	1,276,946	1,302,485	1,328,534	1,355,105
Other Facility Costs		950,638	1,053,172	1,074,235	1,095,720	1,117,634
Total Operating Expenses		\$5,758,990	\$6,008,576	\$6,272,496	\$6,447,364	\$6,579,610
Totals 2017 Addendum		\$5,909,062	\$6,065,535	\$6,109,335	\$6,176,435	\$6,138,685
Totals 2014 Addendum		\$2,863,963	\$3,047,937	\$3,104,673	\$3,104,673	\$3,289,683
Totals 2008 SMP		\$2,352,501	\$2,609,654	\$2,598,561	\$2,721,008	\$2,895,700

Table 15. NCGM 5-Year Operating Budget

Note: Detailed budgets for each category are included in the appendix to the 2017 Addendum

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CHAPTER 25: CAPITAL PHASE SCHEDULE AND BENCHMARKS

2008 Strategic Master Plan Summary

The SMP underscored the importance of designing a flexible Museum that can meet the anticipated needs of current audiences and has adaptable resources that can be used to meet future needs and community interests. The project was divided into 15 distinct phases:

- Phases 1-3: Preliminary Research and Planning
- Phases 4-11: Design, Fundraising, and Contracting
- Phases 12-14: Construction
- Phase 15: Opening

If everything went according to plan, the Museum would begin Phase 3 in August 2008; Phase 12 (groundbreaking) would take place in May 2011, and the Museum would open to the public in May 2013.

In addition to the phases, the report provided a detailed list of benchmark tasks along with the responsible party, that must be completed to ensure project progression. The plan noted that benchmarks indicated the most important tasks at any given time, and that other processes might be running in parallel at the same time.

2014 Addendum Summary

The 2014 Addendum adjusted the SMP schedule in response to the move to the waterfront site, which necessitated close coordination with City and state governments as well as Amtrak and the ferry provider on parallel projects like the pedestrian bridge, new ferry terminal, and other waterfront and City improvements.

The addendum recommended preparing a site development plan to integrate these projects. This coordination, along with fundraising and the challenges associated with constructing on a constrained waterfront site, were anticipated to extend the project timeline. At the time of the addendum, phases 1-4 were completed, and the USCG expected to complete environmental studies and agreements (Phase 5) by May 2014 and planned a ceremony at that time. The Museum was now anticipated to open in late 2017 or early 2018. The benchmark list was not updated.

The addendum recommended that there be greater flexibility in the turnover of the Museum to the USCG, as factors like punch lists, outstanding pledges, grant requirements and issues with vendors and abutters take time to resolve.

2017 Addendum Summary

The 2017 Addendum provided updates related to key decision points and new target dates. Now, the Museum anticipated opening in 2022. As in 2014, the new site meant that progress on Museum construction would be directly affected by the pedestrian overpass project, the new ferry terminal, and other City projects outside of the NCGM's control.

The project schedule retained the same 15 phases outlined in 2014, but added “key decision points,” moments when managers could make critical decisions such as hiring based on progress towards project milestones. Progress towards milestones might be complicated by the division of responsibility between the USCG and the NCGMA; the addendum noted that that this division could effectively “double-track” the project and either speed it up or slow it down significantly.

Given that the division of responsibility was still under discussion, the proposed schedule assumed one project managed centrally with sequential management. At the time of the 2017 addendum, phases 1-6 were completed, and phase 7 was expected to be complete by May 20, 2018. Groundbreaking would take place June 20, 2019, and the Museum would open May 28, 2022.

2020 Update

With the NCGM Construction Documents complete, Exhibit Design and fundraising underway, and the pre-construction activities and permitting nearing completion, the NCGMA anticipates completing construction of the Museum building in 2024.

Fundraising and Construction Alignment

The NCGMA board has identified the following fundraising thresholds for starting different phases of the project:

- Once 30% of privately raised funding goals is secured, NCGMA staff will recommend to the NCGMA Board of Directors to begin the bulkhead and fill phase of the project.
- At 50% of privately raised funding goals, NCGMA staff will recommend to the NCGMA Board of Directors to begin work on the 2nd phase of Museum construction, piles that will support the Museum.
- At 65% of funding, NCGMA staff will recommend to NCGMA Board of Directors to begin building construction, NCGMA may secure bridge loans to finance the construction as 5-year pledges will continue to come in until 2029/2030.

The schedule allows the Museum to open in approximately four years and assumes that the financing for Museum construction will be resolved within the first year.

Pre-Construction Activities

Other pre-construction work, including completing National Historic Preservation Act and NEPA compliance, and coordinating final approval of the pedestrian bridge, appears to be on track to be completed by mid-2021, clearing the way to start site work in 2022, as long as fundraising goals are met. Building construction could then begin in 2022 with an optimistic construction schedule of 15 months. Given the constraints of the site and the quality of the finishes, it is possible that construction may take longer.

Exhibit Planning, Design and Fabrication

In addition to construction of the building, there are several planning and design processes that need to be completed to fit out the building’s interior. The USCG anticipates exhibit design completion by the end of 2021. Upon completion, the exhibits can begin to be fabricated during the second half of 2023 and installed once the building is completed. Design and construction of the STEM Center can follow a concurrent design process that will allow it to fit seamlessly into the other exhibits and experiences within the building.

Orientation Film

The schedule assumes development of a 10-minute orientation film. Research and contracting processes may need to begin sooner.

Overall Project Schedule

The overall schedule included in the 2017 Addendum continues to be useful in understanding the key decision points for the project. It can be moved forward as needed by the Museum's project management team.

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CHAPTER 26: CAPITAL BUDGET

Note: Previous updates have called this chapter ‘Startup Budget’ and the Capital Budget outlined in this Chapter should be considered an update to the Startup Budgets provided in the SMP and the 2014 and 2017 Addendums.

2008 Strategic Master Plan Summary

The SMP Capital Budget was based on the \$65 million fundraising goal established by the NCGMA. Recognizing that the USCG and the NCGMA would be sharing costs, the SMP expected that the NCGMA would be responsible for providing all capital funding for the new building, while the USCG would be solely responsible for moving collections currently held at the CGA to the NCGM. The capital budget did not account for USCG involvement in preparing environmental studies and agreements, staff time to manage the project, and the protection of collection material in Forestville, MD. Notably, the budget did not include any funds spent by the NCGMA prior to August 1, 2008. The goal of the budget was to provide recommended allocation of funds, not precise estimates of expenses, since nothing had yet been designed.

Capital Budget Allocations

The **\$65M Capital Budget** was divided into six areas:

- **\$30.8M to Building Contract** included the construction of the building, which was estimated to be approximately \$22 million, as well as landscaping, building equipment, and similar items for a total of \$30.8 million.
- **\$8.5M to Building Associated** including site engineering, permitting, and title work.
- **\$1.5M to Museum Equipment** including furniture, visitor services equipment, communication, and security systems.
- **\$14.6M to Program Costs**, which included developing the exhibits, the learning center, theaters, and other aspects of the visitor experience.
- **\$4.4M to Project Management.**
- **\$5.2M to Museum Funds** that are reserved for operations support during the first three years and to seed the Museum’s endowment.

Budget Assumptions

The SMP made several important assumptions in the budget. First, it assumed that the New London Development Corporation, City, and state would assume site development costs and that many of the services and equipment detailed in the budget would be donated. While the building budget listed a SF cost of \$350, accounting for architecture and engineering and other soft costs brought the number to \$636 per SF. In addition, benchmarked museums suggested that \$400 per SF was a reasonable estimate for exhibit costs.

Finally, the SMP recognized that funds to help the Museum get beyond opening day would be necessary. A small loan to cover outstanding pledges might be needed, but the SMP cautioned strongly against borrowing to fund construction costs with the expectation that they could be repaid based on earned revenue and future

donations. They noted that museums that have gone this route “have routinely suffered.” The report also recommended allocating at least \$3 million as the start of an endowment to support the Museum long-term.

2014 Addendum Summary

Given the decision to move the Museum to a highly constrained site on the waterfront in downtown New London and to select Gauchat/Santos to develop a building concept, the NCGMA set a maximum revised capital budget of \$80M on the advice of fundraising counsel. The budget included \$1.6M in fundraising costs. The 2014 Addendum notes that this was a low estimate and that actual fundraising costs were expected to be much larger.

Capital Budget Allocations

The **\$80M 2014 Capital Budget** allocated:

- **\$51.9M to Building Contract** (an increase of \$21.9M)
- **\$9.6M to Building Associated** (an increase of \$1.1M)
- **\$1.4M to Museum Equipment** (a decrease of \$0.1M)
- **\$11.8M to Indoor Program Costs** (a decrease of \$2.8M)
- **\$3.4M to Project Management** (a decrease of \$1.0M)
- **\$2.3M to Museum Funds** (a decrease of \$2.9M)

The new figures for Building Contract and Building Associated added \$21M to the budget, whereas all other areas saw reductions ranging from \$131,000 to over \$3M. The most notable changes were the reduction of the exhibit cost from \$400/SF to \$350/SF, the cancellation of the Feature Theater, and the reduction of the endowment to \$500,000. The addendum suggested that these and other reductions reduced the quality of the Museum and might hamper its future financial well-being.

Construction Cost Estimates

(b) (5)

the addendum urged the NCGMA to produce another concept design that would be less expensive to build, and to apply cost savings to other budget areas, especially the endowment. This recommendation was not implemented.

The addendum made it clear that the tight budget meant that the NCGMA must be very careful not to approve processes or contracts until funds were completely raised, noting that museums that take on debt to complete construction “usually suffered for years.”

2017 Addendum Summary

By 2017, there had been additional changes to both the proposed Museum design and the budget. The 2017 budget did not appear to have a cap, as both previous budgets had, and did not make reference to fundraising limits.

Capital Budget Allocations

The **\$136.9M 2017 Capital Budget** allocated:

- **\$62.8M to Building Contract** at \$919 per SF
- **\$12.6M to Building Associated** soft costs
- **\$2.1M to Museum Equipment**
- **\$24M to Indoor Program Costs**
- **\$13.7 to Project Management**
- **\$1.7M to Museum Funds**
- **\$20M to the Pedestrian Bridge**

The pedestrian bridge would be funded with \$20M from the State of Connecticut. Including the pedestrian bridge, the budget increased by \$56.5M from 2014 and by \$71.6M from 2008. In 2017, every aspect of the capital budget increased, except for the endowment which was deleted from the budget.

The capital budget increased for several reasons:

- First, the “start-up costs” were now clearer as the NCGMA had developed into a full-time professionally staffed organization. NCGMA was budgeted to expend over \$10M in unspecified pre-opening costs.
- Second, the increased size of the Museum building added \$10.9M to the budget. The addendum suggested that this figure was likely low because it relied on a cost estimate from the end of the Schematic Design process. Since then, the building had increased from 68,325 GSF to approximately 82,000 GSF. An updated estimate was not available at the time of the 2017 addendum.
- Third, the biggest increase to the budget was to support program and exhibits costs, including the reintroduction of a feature film (+\$4M), which together added \$12M.

The addendum noted that previous budgets had been constrained by fundraising goals, which had resulted “in sub-par allocations.” The 2017 budget was seen as generally reflecting a stronger quality of programs and exhibits. The addendum encouraged the NCGMA to start a fundraising campaign for an endowment as soon as possible after construction.

The addendum again strongly cautioned against borrowing to fund construction with the intention to pay down the loans through earned revenue and future fundraising, as this has rarely been successful for other museums. To avoid this scenario, USCG and NCGMA needed to work closely to make sure milestones were met, and that neither green lighted processes until funding was secured.

2020 Update

Construction Cost Estimate

Payette, the architecture firm hired by the NCGMA, completed construction documents for the Museum building in 2019. Shortly after, the NCGMA contracted with the Connecticut based contractor A/Z Corporation for pre-construction services. A/Z produced a “100% Construction Design Estimate Budget” for the NCGMA with estimated construction costs for the four primary components of the project, the Museum building itself,

the pedestrian bridge, site finishes (primarily landscaping), and the bulkhead and fill needed to complete the building's site.

The estimated construction costs are very similar to the 2017 Addendum's preliminary estimates. Costs were kept stable, despite escalation, through value engineering. While the overall building remained the same size, several of the interior spaces were left unfinished, including the office areas and catering kitchen. The impact of these decisions on the programmatic functionality and quality of the building should be assessed in further detail, especially as it pertains to the operability of the building on day one of turnover.

Building Area

The 2017 construction cost estimate is based on the architectural program of spaces needed which totaled 68,325 GSF as documented in table 20.5 of the 2017 Addendum. The actual building as designed is estimated to total approximately 83,800 SF overall, an overall increase of more than 15,000 SF without any significant increase in usable area. (See chapter 20 for more details.)

Program Costs: Visitor Experience, Program, and Exhibit Budgets

The 2017 Addendum's Program Costs budget included \$24.M in exhibit, program, and related costs. The current Program Costs Budget (Table 16) reallocates and adjusts those cost estimates to better fit with the Museum's current projected programs. The most notable changes are a significantly larger exhibit budget and the elimination of the feature film and related projection equipment, a savings of more than \$4.0M.

Program Costs Budget	2017 Total	2020 Estimate
Exhibit Planning & Implementation		
Visitor Research and Evaluation	\$175,000	In exhibit budget
Exhibit and Program Planning	\$250,000	\$3,079,300
Theater Study/Plan	\$35,000	In exhibit budget
Content Research for Label Copy	\$175,000	In exhibit budget
Label Copy	Incl	In exhibit budget
Installation Expenses	\$150,000	In exhibit budget
Travel & Expenses	\$100,000	In exhibit budget
Management & Coordination	\$175,000	In exhibit budget
Owner Furnished Items	\$50,000	In exhibit budget
Rights and Object Acquisition	Incl	In exhibit budget
Label and Small Graphic Production	Incl	In exhibit budget
Program Integration with Architecture	\$250,000	In exhibit budget
Exhibit Lighting	\$325,000	In exhibit budget
Contingency	\$1,141,531	Not included
Lobby & Atrium Finishes	\$1,250,000	Incl. with architecture
Museum Galleries: Five Wings	10,168,125	20,000,000
Feature Theater		
Projection System	850,000	125,000
Screen	225,000	50,000

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Seating (150 @ \$250)	37,500	37,500
Furnishings & Supplies	75,000	75,000
Lobby Treatment	65,000	No lobby
Goods/Services/Other	50,000	50,000
Signature Film	4,000,000	Not included
Initial Programming	60,000	In exhibit budget
Introductory Theater Equip	Combined	In exhibit budget
Introductory Theater Show	Combined	In exhibit budget
Changing Exhibit Gallery Lighting & Finishes	100,000	50,000
Art Gallery Initial Exhibition	50,000	Not included
Coast Guard Live!	Deleted	Deleted
Motion Simulator Ride (concession)	Deleted	Deleted
Circulation Area Exhibits	150,000	In exhibit budget
Coast Guard Exhibit	175,000	In exhibit budget
STEM Learning Center		
The Commons	75,000	250,000
Themed Program Labs	600,000	850,000
Other Learning Center Set-up Costs	50,000	50,000
Early Learning Center	350,000	No space for this
Simulator Stations and Programs	1,500,000	No space for this
Event Center		
Media and Other Equipment	350,000	TBD
Tables, chairs, etc.	75,000	TBD
Decor and Environment	100,000	TBD
Lecture Hall		
Media and other equipment	Combined	Combined
Tables, chairs, etc.	Combined	Combined
Web Site & Digital Outreach Development	350,000	200,000
Collections Storage FFE	Deleted	
Collections Handling for Exhibits	150,000	150,000
Moving the New London Collection	Deleted	
Exhibit & Program Tools/ Maintenance Equipment		
Exhibit Shop	65,000	65,000
Print & Graphics Workshop	45,000	45,000
Maint Equip (fork lifts, etc)	90,000	90,000
In-Gallery Promotional Facilities	90,000	TBD
Total Program Costs Budget	\$23,972,156	\$25,166,800

Table 16. NCGM Updated Program Costs Budget

Overall Updated Estimated Capital Budget

While the 2017 Addendum includes detailed estimates for many other components of the capital budget, most of those detailed costs serve only as placeholders until programmatic plans are in alignment with the actual spaces that will be available in the building. The overall capital budget update (Table 17) accepts these programmatic uncertainties as reasonable approximations at this stage of the project's development. As exhibit and program details are refined, the budgets can be updated to more accurately reflect the projected costs.

NCGM & USCG Capital Budget 2020 Update	2017 Overall	2020 NCGMA	2020 USCG
1. Museum, Bridge, Site, and Bulkhead Construction	\$ 62,800,000	\$ 85,500,000	—
<i>The 2019 estimate includes construction costs from a 100% CD Estimate by the A/Z Corp and updates from NCGMA as of 16 April 2020. This cost estimate includes \$62.7M for the museum building, \$11.7M for the pedestrian bridge, \$1.5M for site finishes and landscaping, and \$5.5M for bulkhead and fill.</i>	<i>68325 sf @ \$ 919.3/sf</i>	<i>Building cost is \$62.73M for 82000 SF at \$765/SF</i>	
2. Owner's Costs (Building Associated or Soft Costs)	12,600,000	13,300,000	—
<i>Includes architectural and engineering fees of approximately 12%, building project management, testing during construction, special consultants, and other tasks listed as "Building Associated" in the 2017 SMP Startup Budget and as Soft Costs (non-CM) in the 16 April 2020 budget.</i>	<i>Calculated as approximately 20% of Building Construction</i>	<i>2020 NCGMA Estimate</i>	
3. Museum Equipment	2,100,000	—	2,400,000
<i>Includes furniture, fixtures, and equipment, computer and data processing equipment, and other needed materials as outlined and calculated in "Museum Equipment" of the 2017 Startup Budget. The 2020 budget is escalated by 4%/year for three years, a 12.5% increase overall.</i>	<i>3.3% of Building Construction</i>		<i>2.7% of Building Construction</i>
4. Program Costs (Including Visitor Experience and Exhibits)	24,000,000	—	25,200,000
<i>The 2020 estimated costs for exhibits, program, and other visitor experience related costs as updated</i>			
5. Pre-Opening Costs and Project Management	13,700,000	21,100,000	16,200,000
<i>The 2017 SMP budget includes estimated pre-opening costs of \$10.4M for NCGMA and \$3.3M for USCG. This update adds the NCGMA's 2020 estimated Non-Capital Costs through 2024 of \$20.5M and the USCG's 2017-21 expended funds of \$7.9M and adds an additional \$8.3M of USCG pre-opening staff and administrative costs (see Chapter 23).</i>			
6. Museum Funds	1,700,000	—	—
<i>Museum Funds is a placeholder for the start of an operating endowment for the museum. No funds are allocated for an endowment in the 2020 budgets.</i>			
7. Contingency	—	—	4,400,000
<i>2020 funds to cover escalation for the overall USCG budget over the next three years and to assist with unexpected costs in all areas. Estimated at approximately 10% of subtotaled costs, if construction begins in 2022.</i>			
Total Estimated Project Costs	\$ 116,900,000	\$ 119,900,000	\$ 48,200,000
<i>Note: All estimates are rounded to the nearest hundred-thousand.</i>			

Table 17. NCGM Overall Updated Capital Budget

Overall Capital Budget Comparison

Table 18 compares the prior overall Capital Budgets to the 2020 estimate using the SMP's overall budget format.

	2008	2014	2017	2020	Variance '17-'20
Construction	\$30,782,130	\$51,885,000	\$62,811,501	\$85,500,000	\$22,688,499
Building Associated	8,525,122	9,634,100	12,562,300	13,300,000	\$737,700
Museum Equipment	1,513,000	1,382,000	2,057,500	2,400,000	\$342,500
Program Costs	14,640,065	11,791,500	23,972,156	25,200,000	\$1,227,844
Project Management	4,440,000	3,390,000	13,689,137	37,300,000	\$23,610,863
Museum Funds	5,284,533	2,250,884	1,721,690	0	-\$1,721,690
Project Contingency	—	—	0	4,400,000	\$4,400,000
Total Capital Budget	\$65,184,850	\$80,333,484	\$116,814,284	\$168,100,000	\$51,285,716

Table 18. NCGM Overall Capital Budget Comparison

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CHAPTER 27: CONCLUSIONS, RECOMMENDATIONS, AND NEXT STEPS

2008 Strategic Master Plan Summary

The SMP provided a brief overview of the plan parameters and how they would produce desired outcomes for the USCG. If implemented successfully, the Museum would offer many benefits, including increased public awareness, appreciation, and support, including increased interest in enlistment. In addition, it would provide opportunities for USCG members past and present to come together. Before these outcomes could happen, there were many pieces that needed to come together as well as risks that must be mitigated.

A Complex Undertaking

The proposed Museum was a complex project that required the enthusiastic cooperation of a range of partners including the USCG, the NCGMA, the State of Connecticut, the New London Development Corporation, the City of New London, and others. Even if these parties came to agreement, the project must also gain the approval of the public to meet fundraising goals. And, because the redevelopment of the Fort Trumbull area was still in flux, the Museum needed to be prepared to adapt to changes including maintaining access to the waterfront.

Next Steps

To move the project forward, the SMP provided a list of next steps in chronological order. Critical first steps included that the USCG provide a letter of Status and Intention and appoint a project liaison who would be assigned to the project for a minimum of five years. These actions would formalize the USCG's commitment and lay the groundwork for developing MOUs with the NCGMA, the State of Connecticut, the City of New London, and others. Following the completion of MOUs, a site master plan should be developed, followed by a fundraising feasibility study, and the beginnings of the capital campaign. Once 50% of the campaign goal was raised, the Room Book, which would guide design, would be finalized, and an architect selected. The SMP advised against holding an architectural competition. At this point, additional studies related to the visitor experience including learning spaces, food service, and theaters would be undertaken to inform design. At the conclusion of the design process, the design would be approved by Congress. Building and exhibit design could then begin.

Developing and Maintaining a Shared Vision

Throughout this period, it would be critical to develop and maintain a shared vision for the Museum held by the USCG and the NCGMA. In addition, both organizations should continue to engage community partners in discussions about the future Museum and respond to opportunities within the community. The SMP also recommended organizing trips to other museums to help educate potential donors and keep the USCG and NCGMA up to date on best practices and changes in the museum world. Similarly, the USCG should develop methods for researching and documenting best practices for the proposed Museum.

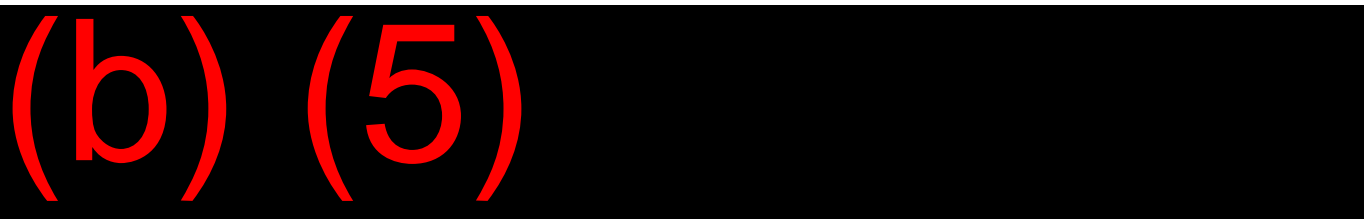
Risks and Mitigations

The report provided a list of 16 known risks and mitigations which can be grouped into the following list of concerns.

- The development of Fort Trumbull, including the proposed hotel and conference center, might not go as planned or may be developed over a much longer period of time than expected.
- That wayfinding through improved signage and easy access to downtown via water taxi or pedestrian bridge would not be implemented, making it harder to visit the Museum and reducing visitation.
- Insufficient parking would decrease visitation and capacity for special events.
- The fundraising goal of \$65 million could be too high and/or that various factors could drive the building over budget.
- The Museum might not meet its attendance potential because of the factors above or new ones.
- USCG withholds endorsement of the project or does not fund it as projected.
- State or congressional approval denied.
- Museum is poorly implemented or poorly managed after opening.

The SMP felt that these risks could be mitigated and should not stand in the way of pursuing the project.

- The concerns about the development of Fort Trumbull could be mitigated by delaying some aspects of the project or accepting that the Museum would not reach its full potential until the Fort Trumbull project was completed.
- The concerns about wayfinding should be addressed through MOUs established early in the project. As with the concerns with the development of Fort Trumbull, the Museum would not reach its full potential until these projects were complete.
- Parking concerns should be addressed in MOUs. If no parking is created, then the Museum would need to commit to building a parking structure of its own, which would add about \$10.2M to the budget and require additional land acquisition.
- If fundraising goals proved to be optimistic, the Museum should either be delayed if goals were a little short or create a new plan if far short. The new plan might call for a less ambitious building project. Under no circumstances should the NCGMA borrow money to construct the Museum, as it would create

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leadership.

- Concerns about Federal and State approval should be managed by MOUs with the state and attention from the USCG's legislative affairs branch.
- Concerns about implementation should be addressed by hiring a President for the NCGMA who is experienced at running museums and launching new ones; likewise, concerns about managing the Museum after opening could be met by hiring an experienced museum director.

Conclusions

There was much to be done to begin developing the Museum, and high levels of support would be required from a wide range of partners as well as the general public. Still, the SMP process had revealed a broad base of support for the project by community and regional partners. If this excitement could be translated to the USCG's many supporters and the general public, fundraising goals were likely to be met. As long as the project employed skilled museum leaders and fundraisers to develop the Museum as described in the SMP, it was believed that the Museum would be a success and a credit to the USCG.

2014 Addendum Summary

The 2014 Addendum reiterated the importance of establishing MOUs with key partners. In particular, it was critical that the NCGMA and the USCG had a shared understanding of the design priorities and functional requirements that would make up the architectural program before the architect officially began schematic design.

Project Status

At the time of the update, the following statements represented the status of the project and agreements governing it:

- The NCGMA would raise funds, design, and construct the Museum before giving to the USCG as their national museum.
- The NCGMA was currently in a search for management level staff.
- A new architect, Payette, had been retained to develop Urs Gaucaht's preliminary concept.
- Gallagher & Associates would design the exhibits.
- Skanska had completed a preliminary construction cost estimate.
- Professional fundraiser Odell Simms and Lynch Inc. had been contracted to begin national fundraising efforts.

Next Steps

The addendum recommended the following next steps, presented in chronological order:

- Implement MOUs with all partners.
- Secure funding for professional staff to plan the project at NCGMA and have the USCG assign a project liaison for a minimum of five years.
- Develop a site plan in consultation with all parties.
- NCGMA to authorize additional work including studies on food service, function rentals, and other Museum aspects as needed.
- Based on early phase of fundraising and lead gifts, determine what additional amount of fundraising is feasible.

Conclusion

The addendum affirmed the broad base of support for the Museum project within key state, regional, and national partners as well as the local community, although these still needed to be translated into agreements

and actions. Likewise, excellent leadership from the NCGMA would be required to transform this interest into financial support. Assessing the changes since SMP, the addendum concluded that the changes either produced the same or better results per the outcomes identified in the SMP. The addendum retained a high level of confidence that the Museum would be successful if it was developed according to the SMP and the 2014 Addendum.

2017 Addendum Summary

In 2017, this chapter was not updated. Instead, the 2017 Addendum added a new chapter, Chapter 28: Risks and Mitigations, which included information from Chapter 27. See Chapter 28 for the 2017 Addendum Summary.

2020 Update

Please see Chapter 28.

CHAPTER 28: RISKS, MITIGATIONS AND RECOMMENDATIONS

2008 Strategic Master Plan Summary

See Chapter 27. Chapter 28 was a new chapter in 2017.

2014 Addendum Summary

See Chapter 27. Chapter 28 was a new chapter in 2017.

2017 Addendum Summary

Chapter 28 was introduced in 2017. Its purpose was to identify current risks and mitigations at a high level. Some risks had decreased since 2014. The NCGMA now had a full-time professional team, decreasing the risk that fundraising goals would not be met or that permitting would be denied. In addition, both the USCG and the NCGMA had identified funds to support the Museum and had initiated additional planning processes, including the completion of a schematic design for the building.

Risks

Risks remained in the 2017 Addendum. The addendum recommended developing written agreements with partners and identifying KDPs which would allow for holds and off-ramps to manage risk.

Mitigations

The addendum stated that the success to date in finding funding for additional planning and permitting, as well as ongoing community and regional support, boded well. The professionally staffed NCGMA and the record of successful collaboration between the USCG and the NCGMA demonstrated that some of the risks could be successfully mitigated.



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Possible Mitigations

All parties continue to work diligently toward making the NCGM a reality. Current successes are evidence that risks such as those noted above can be mitigated – both parties utilizing funding to continue to move the project forward (building design, exhibit design, regulatory compliance, etc.), the project is up and running organizationally, and the community is largely supportive.

The NCGMA and USCG have collaborated on key planning initiatives, and established ways of documenting agreement. There is mutual respect and a will to make it work.

Given this history, maintaining standard mitigation procedures such as the following will reduce risk:

- Collaboration on key decisions
- Communication
- Openly discuss risks and mitigations
- Written agreements about expectations
- KDP checkpoints and approvals
- Contingency funds and schedules
- Fast-action decision routes
- Clear lines of responsibility – no gaps
- On-call resources, expertise and back-up
- Go slows, holds, and off-ramps
- *Semper Paratus*

The most important mitigation is to not start any expenditure until all funds have been received or contracted for and all approvals obtained for that expense.

The KDPs are listed in the Implementation Schedule (Table 25.1 of the 2017 Addendum) are a way for both parties to formalize moving forward after meeting key goals.

One of the project risks is that the NCGMA will not be able to generate net cash to the Museum after opening, particularly during the early years when the NCGMA is still finishing the building and paying off potential loans. The best way to mitigate this likely risk is to make sure the Coast Guard has enough resources to operate the Museum successfully without any net revenue from the NCGMA.

2020 Recommendations

While some of these risks noted in this chapter are more likely than others, it is important for all of the parties to acknowledge them and to make realistic plans to address them, should they come to pass. Planning for “What happens if?” situations not only protects the project but also reassures funders and other stakeholders that the project is being effectively managed.

In addition, the following are a series of recommendations that if acted upon in the near term can further mitigate project risk:

- **Finalize and execute outstanding MOAs:** In order to clearly define current and future short- and long-term stakeholder responsibilities, develop a schedule for MOAs (if not already developed) and schedule stakeholder negotiation work sessions in order to finalize MOA language in accordance with MOA schedule deadlines.
- **Begin planning for a Museum Strategy for the USCG.** The Coast Guard is the only branch of the armed forces without a dedicated museum command. For every other service, the flagship museum has grown out of a long-term commitment to collecting, preserving, and sharing the service’s stories and the material culture that brings those stories to life. Using other services’ museum commands as a model, develop a long-term plan to create a similar administrative structure for the USCG. This group would oversee the Forestville collections, the Academy’s museum and collections, the USCG historians, and the NCGM. This administrative structure would provide leadership, management support, and resources for both the public and the behind-the-scenes museum programs.
- **Confirm funding commitments from Congress and/or the USCG for NCGM startup and ongoing operational funding.**
- **Begin to build the Museum Staff:** Bring on additional senior-level staff with significant museum experience, ideally including museum development, to help plan for the new museum and to begin programming and promotion of the museum via social media.
- **Renew the Strategic Master Plan:** In order to clarify project priorities and bring stakeholders together around a shared set of ideas, use the current SMP addendum as a foundation to develop a new, comprehensive, consensus-driven master plan for the museum that clearly identifies a shared mission, prioritized constituent groups, associated activities and experiences, dynamic exhibits and programs, and related facility and budget requirements.

- **Prepare Program and Business Plans for Margins of Excellence Programming:** Using the programmatic priorities identified in a Renewed Strategic Master Plan, develop business plans, including detailed operation plans and net revenue projections for the store, cafe, event space, STEM Center, and other identified revenue generating opportunities including the potential membership program.
- **Develop a shared Implementation Plan and Master Schedule:** Develop a clear and comprehensive shared implementation plan and master schedule to guide the NCGM development. Include planning, design, construction and funding milestones and clearly defined Key Decision Points. Share with USCG leadership, Congressional leaders, and potential and already committed funders to generate additional confidence that the project will be completed successfully.
- **Finalize agreements for Land Acquisition:** Complete negotiations and set the terms associated with the acquisition of parcels needed for construction. Prepare final, ready-to-execute versions of land acquisition documents so they can be implemented expeditiously when needed.
- **Develop a coordinated Parking Plan:** Work with the City of New London to develop a parking strategy for the museum that does not depend on the expansion of the Water Street garage or reliance on street parking.
- **Finalize strategy for museum multipurpose program spaces:** Plan for the fit-out of the museum's multi-purpose spaces with furnishings, equipment, and technology associated with the multiple programs planned for those spaces.
- **Identify off-site Space Program needs.** Conduct a study to identify the off-site space needs such as staff offices, museum shop storage, general storage, and curatorial/collections workspace and storage. Identify potential space locations, adjacency/access requirements, budget planning, schedule, and alignment with the museum's Opening Day schedule.

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EXHIBITS

Exhibit A: 2017 Preliminary Master Interpretive Plan

Exhibit B: 2020 Master Interpretive Plan

Exhibit C: 2018 Museum Education Initiative Final Concept Report (Phase I)

Exhibit D: 2018 Museum Education Initiative Final Concept Report - Addendum (Phase II)

Exhibit E: 14 U.S.C. § 316 as amended by §8439(a) of the *Elijah E. Cumming Coast Guard Authorization Act of 2020* (Pub. L. No. 116-283)

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EXHIBIT A

2017 Preliminary Master Interpretive Plan

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United States Coast Guard Future National Coast Guard Museum

EXHIBIT PROGRAM PHASE
February 2016 through March 2017

PRELIMINARY MASTER INTERPRETIVE PLAN
May 05, 2017

MUSEUM EXHIBIT ADVISORY CORE TEAM CONTRIBUTORS

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INTRODUCTION

The National Coast Guard Museum Association is currently raising funds to design and build a future National Coast Guard Museum in New London, Connecticut. This is the preliminary **Master Interpretive Plan** developed to provide guiding direction for future detailed museum exhibit design. The plan also includes the major themes, key messages, and early concepts for museum flow and the overall visitor experience.

ACKNOWLEDGEMENTS

In February of 2016, the National Coast Guard Museum Association held its opening conference in Washington DC and invited members of the **Museum Exhibit Advisory Panel (MEAP)** to begin asking the question: *How will we bring Coast Guard History to life?*

A smaller **MEAP Core Team** was formed in the following April and a charter was written to define the goals and outcomes to be completed during the **Exhibit Program Phase**. This resulting **Master Interpretive Plan** is the product of continued refinement throughout the year-long effort. Team charters with full rosters are included in the digital archives of this report.

The Museum Exhibit Advisory **Core Team** is comprised of representative members from the Coast Guard Museum Exhibit Advisory Panel (MEAP). Also included are the Creative Design and Research Team members from *Gallagher and Associates* and *History Associates*. The following is a list of the major contributors to this report:

National Coast Guard Museum Association

(P)(II) (b)(6) Resident and Chief Executive Officer
(P)(II) (b)(6) Executive Director / *U.S. Coast Guard (retired)*
(P)(II) (b)(6) Logistics and Event Coordinator / *U.S. Coast Guard (retired)*

Coast Guard Museum Exhibit Advisory Panel (MEAP)

(P)(II) (b)(6) Coordinator / *U.S. Coast Guard (retired)*
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Creative Design and Research Team

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(P)(II) (b)(6) Project Manager / *Gallagher and Associates*
(P)(II) (b)(6) Designer / *History Associates*
(P)(II) (b)(6) Historian / *History Associates*

EXHIBIT PROGRAM PHASE – TIMELINE

The **Master Interpretive Plan** is the final deliverable that captures the work completed during the **Exhibit Program Phase**. The following is a summary of the key events and activities.

Feb 2016 MEAP Kick-Off Meeting	<ul style="list-style-type: none">• Preliminary Architect Concept Design – Presented• Museum Exhibit Program Phase Definition
April 2016 Core Team Kick-Off Meeting	<ul style="list-style-type: none">• Master Interpretive Plan Phase – Project Definition• Establish online MEAP forum
May/June 2016 Core Team Meetings (with creative design & research team)	<ul style="list-style-type: none">• Master Interpretive Plan Phase 1 Guiding Direction – Development
July 2016 MEAP Summer Conference	<ul style="list-style-type: none">• Final Architect Concept Design – Approval• Master Interpretive Plan Phase 1 Guiding Direction – Review
August/September 2016 Core Team Meetings (with creative design & research team)	<ul style="list-style-type: none">• Master Interpretive Plan Phase 1 Guiding Direction – Approval• Master Interpretive Plan Phase 2 Exhibit Content – Development
Oct 2016 – Jan 2017 Core Team Meetings	<ul style="list-style-type: none">• Master Interpretive Plan Phase 1 Guiding Direction – Approval• Master Interpretive Plan Phase 2 Exhibit Content – Development
Feb 2017 MEAP Winter Conference	<ul style="list-style-type: none">• Final Architect Concept Design – Presented• Master Interpretive Plan Phase 2 Exhibit Content – Review
March 2017 Core Team and USCG Meeting	<ul style="list-style-type: none">• Master Interpretive Plan Phase 2 Exhibit Content – Approval• Preliminary Master Interpretive Plan Submission

MASTER INTERPRETIVE PLAN – COMPONENTS

Major components of the **Master Interpretive Plan** include:

- ▶ Museum mission and vision statement
- ▶ Museum interpretive goals and visitor key take-away messages
- ▶ Museum interpretive themes, potential galleries and visitor experiences
- ▶ Museum exhibit content with example stories, objects and artifacts

- Museum bubble diagrams showing major space requirements and visitor flow

MASTER INTERPRETIVE PLAN – GUIDING DIRECTION

The following vision, mission, goals, key take-away messages and additional messages were approved by the National Coast Guard Museum Association to serve as the *Guiding Direction* during the *Exhibit Program Phase*.

VISION

The National Coast Guard Museum will inspire, inform, and engage visitors by honoring the courage and skill of the men and women of the United States Coast Guard.

MISSION

The National Coast Guard Museum will engage the public with a variety of artifacts, exhibits, interactive experiences, and educational programs designed to celebrate the Coast Guard men and women and their accomplishments in the past, present, and future.

INTERPRETATIVE GOALS

1. Establish a world class museum facility, waterfront, and exhibition space that will attract international attention, strengthen the Nation’s maritime museum system, and become the hallmark attraction for national and international visitors.
2. Tell compelling stories from the Coast Guard’s past and present.
3. Convey the important missions performed by the Coast Guard as well as the service’s significant national and global impact.
4. Inspire visitors to appreciate the national service and values of Coast Guard men and women, and follow in the footsteps of the many in our service– both past and present.
5. Showcase the service as a leader of maritime science, technology, and research; and engage visitors on the importance of STEM in executing CG Missions.
6. Provide interactive experiences that expose visitors to the complexity of accomplishing U.S. Coast Guard duties.
7. Excite visitors regarding the Coast Guard’s expanding role in our Nation’s future.
8. Elicit the following emotional responses in visitors:
 - a) Awe and respect for the Coast Guard profession
 - b) Admiration for the wide expanse of Coast Guard roles
 - c) Sense of new found knowledge from the exhibits

- d) Excitement to return to the museum

VISITOR KEY TAKE-AWAY MESSAGES

1. From the founding of our Country, the U.S. Coast Guard has played a critical role in the nation's defense, the growth of the United States as a maritime nation, and its significance as a global leader in maritime commerce.
2. The Coast Guard is comprised of predecessor services that have shaped the culture and values instilled today.
3. Coast Guard men and women are on watch all over the world and the nation is safer and more secure as a result.
4. Coast Guard men and women are Lifesavers around the Globe, Champions of Commerce, Stewards of the Environment, Enforcers on the Seas, and Defenders of our Nation.
5. The Coast Guard is unique as compared to other services and agencies.
6. With its many missions, the U.S. Coast Guard has been and continues to be interconnected with our daily lives.
7. Past, Present, and Future: The Coast Guard exemplifies their motto, *Semper Paratus*, by always being ready to respond to our Nation's needs.

ADDITIONAL IMPORTANT MESSAGES

1. Significant Moments in Coast Guard History – Crisis, Catastrophe, and Conflict
2. Evolving Coast Guard and Legacy Services – Response to a forming Nation
3. Always Ready, Always Relevant – the Coast Guard's National and Global Impact
4. Coast Guard Firsts – the Innovators in Technology and the Leaders of Change
5. Over 200 Years of Defending our Nation – the Coast Guard and Legacy Services
6. Unique Coast Guard Identity – Traditions, Customs, Ceremonies, Values and Mascots
7. Character in Action – Coast Guard Heroes and Heroines
8. One Team Coast Guard – Military, Civilian, Reserve, and Auxiliary components
9. Coast Guard at Sea, on Land, in the Air, and up in Space
10. Coast Guard Ranks, Rates, Ratings, Career Paths and General Duties
11. The People who play a vital Support Role including the Spouses and Family
12. A service for Social Change and Diversity

13. A model for Interagency collaboration

MASTER INTERPRETIVE PLAN – EXHIBIT APPROACH & CONCEPT DESIGN

EXHIBIT APPROACH

Using an interpretive thematic approach, major exhibits will be organized by roles and missions within five major themes: (1) Lifesavers around the Globe, (2) Champions of Commerce, (3) Protectors of the Environment, (4) Enforcers on the Seas, and (5) Defenders of our Nation. Clearly defined wings will be included in the architect's museum design, one for each of the five major themes. Within each of these major themes, the creative design team (working with advisory input from the MEAP) developed early concepts for potential galleries, stories, artifacts and experiences. These are described in the following **exhibit concept design**.

EXHIBIT CONCEPT DESIGN

Beginning with a compelling multimedia film that underscores the museum's key messages, visitors will then choose a visitor tour experience from a menu of options. Within each of the options, visitors will then navigate between museum spaces while engaging in a series of interactive moments featuring significant moments and heroic figures from Coast Guard history.

The museum is designed to include a central visitor lobby and cinema theater, major exhibit galleries (located within five wings), a *science, technology, engineering and math* (STEM) center, and adjacent waterfront and rooftop exhibit spaces. During the early exhibit program phase, the creative design team developed the following concepts to help guide the next phase of detailed exhibit design.

1.0 Visitor Introduction

Visitors will arrive and be guided to a state-of-the-art theater where they will be immersed in the Coast Guard's story as the world's premier maritime service. The video presentation will include:

- Key visitor take-away messages and themes of the museum
- Coast Guard history and its legacy services
- Values and character of the men and women in Coast Guard service
- A day in the life of the U.S. Coast Guard Today and Tomorrow

Following the video presentation, visitors will be introduced to a choice of museum tour options that will include:

- Selecting a self-guided or a virtual guide for their museum experience.

- Choosing a Coast Guard profession and attempt a qualification to become a an aircraft commander, rescue swimmer, ship's navigator, search & rescue planner, maritime law enforcement officer, boat coxswain, shipboard or boat engineer, or a marine inspector.

2.0 Lifesavers around the Globe Wing

Visitors will be introduced to the *Lifesavers around the Globe* wing with an interactive moment that might include the search and rescue operations during the northern Atlantic *perfect storm* of 1991.

a) Potential *Lifesavers around the Globe* Galleries

- Famous rescues
- The legacy of the Lifesaving Service
- The history of aviation and SAR technology

b) Example *Lifesavers around the Globe* Stories

- Joshua James
celebrated lifesaver
- Pea Island Lifesaving Station
the rescue men
- Bernie Webber and The Finest Hours
on-scene initiative and courage
- Ida Lewis Lighthouse Keeper
the bravest woman in the world
- Hurricane Katrina's Rescue Swimmers
predisposed to act

c) Example *Lifesavers around the Globe* Artifacts

- Captain Joshua James gold lifesaving medal and his life rescue boat *Nantasket*
- Lyle gun, beach cart, breaches buoy
- Early-to-modern-day lifejackets
- Lifesaving service insignia/uniforms
- News articles and early etchings by famous artists
- Captain Frank Erickson early helicopter hoist and harness
- Captain Bobby Wilks flight helmet
- Rescue swimmer gear and wet suits
- 16' punt boat and common fire ax used during Hurricane Katrina

d) Example *Lifesavers around the Globe* Experiences

- helicopter hoist videos
- helicopter hoist simulation
- helicopter cockpit to explore
- rescue surf boat to row

- breaches buoy with zip line
- signal flare demonstrations
- jacobs ladder for kids to climb
- Hollywood films: *The Finest Hours*, *The Perfect Storm*, *The Guardian*
- rescue center go-or-no-go scenarios
- Bobby Wilks aviator re-enactor
- Joshua James re-enactor

3.0 Champions of Commerce Wing

Visitors will be introduced to the *Champions of Commerce* wing with an interactive moment that might include lighthouse lantern room with changing visibility, seasons, and sea state.

a) Potential *Champions of Commerce* Galleries

- Marine Inspection Service and Marine Safety
- The Legacy of the Lighthouse Service
- Inland Rivers and Great Lakes Commerce
- Arctic Research and Exploration
- Lightships and other Aids-to-Navigation
- Domestic Icebreaking

b) Example *Champions of Commerce* Stories

- Revenue Cutter *Bear* and the Overland Relief expedition to rescue the whaling fleet *dog sleds and caribou*
- Cutters *Storis*, *Bramble* and *Spar* transit the Northwest Passage *crossing new boundaries*
- Steamboat *Sultana* explodes leading to improved vessel safety *inland rivers and the expanding maritime highway*
- Makapu'u Point Lighthouse and the super hyper-radiant Fresnel lens *leader in the development of marine technology and aids to navigation*
- Minot's Ledge Light and the I-LOVE-YOU (1-4-3) flash *engineering marvels of lighthouse construction*

c) Example *Champions of Commerce* Artifacts

- inspection badge, safety pin, uniforms
- steamboat inspection logbooks
- steamboat models
- lighthouse/buoy architect drawings

- lighthouse keeper logbooks
- lighthouse keeper insignia/uniforms
- fresnel lens
- icebreaker models, photos, ship plans
- buoy tender models, photos, ship plans
- *Bear* snowshoes, dog sled, Inuit trade
- plaque commemorating the first U.S. northwest passage
- bridge navigation instruments and charts

d) Example *Champions of Commerce* Experiences

- lighthouse keepers quarters
- lightship *Nantucket* messdeck (café)
- icebreaking and buoy tending videos
- bridge with windows freezing, sounds of ice
- river navigation with changing seasons
- interactive map of lighthouse locations by decade
- interactive range markers
- lighted aid to navigation lantern
- electronic positioning by loran and gps
- positioning an aid to navigation using sextants
- Ida Lewis re-enactor

4.0 *Protectors of the Environment Wing*

Visitors will be introduced to the *Protectors of the Environment* wing with an interactive moment that might include a video introduction to the living marine resources protected by the Coast Guard.

a) Potential *Protectors of the Environment* Galleries

- Protection of Living Marine Resources
- Marine Pollution Response

b) Example *Protectors of the Environment* Stories

- *Exxon Valdez* oil spill in Prince William Sound, Alaska
lessons learned
- *Deepwater Horizon* oil spill in the Gulf of Mexico
fire, oil and water

- National Strike Force response to Kirby Tire recycling dump fire
where's your boat?
- Protecting the fisheries, sea turtles, birds, seals, and whales
guardians of the sea life
- Fisheries protection expands to 200 miles
global positive impact

c) Example *Protectors of the Environment* Artifacts

- strike force equipment
- boarding team gear for fisheries
- fishing boat models
- tanker models
- samples from major spills
- common floating debris
- aerostat system
- air sampling equipment

d) Example *Protectors of the Environment* Experiences

- broadcast news videos and articles
- interactive chart of living marine resource grounds
- underwater and shoreline diorama of LMR
- hands-on salt and fresh water fish tank
- LMR and the food we eat around the globe
- simulate the containment of oil with booms and boats
- operating a submersible ROV

5.0 Enforcers on the Seas Wing

Visitors will be introduced to the *Enforcers on the Seas* wing with an interactive moment that might include a video introduction to the living marine resources protected by the Coast Guard.

a) Potential *Enforcers on the Seas* Galleries

- Enforcing Maritime Laws
- Revenue Marine Service and the Rum Wars
- USCG and the War on Drugs
- Protecting U.S. Ports and Waterways

b) Example *Enforcers on the Seas* Stories

- Captain Michael “Hell Roaring” Healy and the Cutter *Bear*, Mayor of Alaska
new frontiers, multi-mission service
- Prohibition and the Montauk Rum War
patrol boats, a coast guard legacy
close ties to local New London, the Real McCoy, and long island sound maritime history
- Mariel Boat Lift of more than 125,000 Cuban refugees at sea
immigration law and rescue
- New York 9/11 terrorist attacks, a nation in crisis
on scene command, control, and response
- Modern day USCG/USN drug interdictions
on, over, and under the sea

c) Example *Enforcers on the Seas* Artifacts

- customs office flintlock pistol
- revenue cutter flag
- prohibition era contraband
- sheet music from era
- modern era contraband
- photos and news articles
- lethal and non-lethal weapons
- USA flag from New York during 911
- Revenue Cutter models and plans
- Coast Guard Cutter models and plans
- Revenue Cutter *Bear* model, compass, photos, logbooks
- Port Security Unit (PSU) personnel protection equipment and uniforms

d) Example *Enforcers on the Seas* Experiences

- cuban refugee boat constructed with make-shift materials
- code breaking
- use of force – rules of engagement
- sharp shooter simulation
- small boat launching from davits
- PSU boat and armament
- interactive map of deployed units
- operations center with multi-unit coordination exercises
- broadcast news video film footage
- Michael Healy re-enactor

6.0 Defenders of the Nation Wing

Visitors will be introduced to the *Defenders of the Nation* wing with an interactive moment that might include a video introduction to the living marine resources protected by the Coast Guard.

a) Potential *Defenders of the Nation* Galleries

- Revenue Marine Service (RMS) and USCG at War
- World War II
- Global War on Terror
- Training Ships and the USCG Yard

b) Example Stories

- Cutters *Tampa* and *Esanaba* lost in combat action, WWI and WWII
lives lost, families broken
- RADM “Iceberg” Smith, Cutter *Northland*, and the Greenland Patrol, WWII
whatever, whenever, wherever
- The Beach Patrol and the Corsair Fleet, WWII; including the rescue of the Soviet freighter *Lamut* at Teahwhit Head, Washington
protecting the coast, keeping the nation safe
- LT Jack Rittichier, helo crew commander, Vietnam War
fearless determination to save comrades in arms
- DC3 Nathan Bruckenthal, LEDET 403 / TACLET South, Operation Iraqi Freedom
worldwide presence, worldwide impact

c) Example Artifacts

- Douglas Munro medal of honor
- Hopley Yeaton musket
- *Tampa* lifeboat ID plate
- Jacob Lawrence painting
- Letters from servicemen/women
- Cutter armament
- Campaign ribbons and medals
- Revenue Cutter models and plans
- Coast Guard Cutter models and plans
- Paintings/photos of historic moments
- Medal citations
- Wartime uniforms, swords, rifles
- Alexander Hamilton statue

d) Example Experiences

- general quarters / battle stations
- 5-inch deck gun mount
- 327 bridge with video simulation in heavy sea
- Humvee *Eleanor II*
- Higgins boat
- shipboard working radio room
- oral histories
- honor gallery
- interactive maps of campaigns
- sailors sea chest and sea bag w/contents
- crew bunks and officer stateroom
- Alexander Hamilton re-enactor

7.0 Innovators and Technology

The Museum will be designed to immerse visitors in the Coast Guard's broad range of maritime operations and the important and exciting role of **science, technology, engineering, and mathematics (STEM)**.

a) Example Stories and Artifacts

- 1841 first Fresnel lens used in United States installed in Navesink Lighthouse
- 1850 first use of life car saves 201 of 202 people off the wreck of *Ayrshire*
- 1861 Martha J. Coston advances her husband's work to develop the signal flare
- 1869 first steam-powered fog signals installed in Maine
- 1876 J. Lake Parkinson, 1st LSS architect, 1st station designs at Centennial Exhibition
- 1878 Captain Dan Lyle invents the line throwing gun used from 1878-1962
- 1903 Wright Bothers attempt first flight at Kill Devil Hills LSS, Outer Banks NC
- 1904 first ship with radio communications was the *Nantucket* Lightship
- 1908 Charles H. Mclellan designs 36-foot motor lifeboat delivered to Waaddah LSS
- 1919 Elmer Stone pilots first trans-Atlantic flight in US Navy's *NC-4* Curtiss seaplane
- 1942 LORAN navigation system first chain went live at Montauk and Fenwick
- 1944 Cutter *Mackinaw* and Wind-class icebreaking cutters placed into service

CONCEPT FOR “STEM” INTEGRATION

“Throughout the galleries, exhibits will include STEM components to both enhance the museum experience and draw visitors to a high tech and interactive STEM Learning Center. While the major gallery exhibits will showcase Coast Guard stories and artifacts, the STEM Learning Center will focus on the experiences that Coast Guard men and women have every day. All of this is designed to spur young visitors to become tomorrow’s critical thinkers, problem solvers, innovators, and perhaps future Coast Guard members.”

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senior designer at Gallagher & Associates

1.0 Goals for advancing STEM learning and interest

By including a STEM-focused approach to the overall museum design and visitor experience, the future National Coast Guard Museum will leverage K-12 programming, expert speakers, virtual shipmates, operational platforms, engaging museum exhibits, modern exploration laboratories, and interactive experiences and simulations to support three primary goals with STEM:

- a) Create an enjoyable and stimulating learning environment that promotes social interaction and heightens student interest, curiosity, and confidence in continued learning.
- b) Develop a continuum of learning experiences that increase in complexity and provide opportunities for students to improve knowledge and understanding of concepts.
- c) Inspire increased understanding and interest in careers, to include potential careers in the maritime, aeronautics, and the United States Coast Guard.

2.0 Components of the STEM Learning Center

a) STEM CLASSROOM

A classroom within the STEM Learning Center will entertain and inspire families, schools, team challenges, CAMP-ins, K-12 programming, special needs visitors, and homeschoolers. The Center will develop interactive classroom sessions, to include relevant Coast Guard topics to include:

- Global Maritime Environment
- Weather
- Nautical Science
- Maneuvering Boards/Relative Motion and Physics
- Buoyancy and Stability
- Survival at Sea (health science)
- Aviation Principles

b) STEM EXPLORATION LABORATORIES

To support the classroom programs, Exploration Laboratories will host student groups for instructor led programs. Combining classroom lectures with a hands-on exploration laboratory is a proven method to reinforce the subject material.

Using the topic of Buoyancy and Stability as an example, following a classroom presentation on the impact of weight on ships at sea, students will transition to an exploration laboratory with a water tank. Visitors will estimate the weight of the vessel (Archimedes principles), and then add and shift weight, including experiencing sea conditions, to see the impact of stability and buoyancy on ships at sea.

c) STEM INTERACTIVE SIMULATOR CENTER

In addition to the classroom and exploration laboratories, the STEM Learning Center will include an Interactive Simulator Center which manages and controls an aircraft cockpit, a ship's bridge, a small boat coxswain steering station, and a rescue coordination center.

An exciting example of these highly interactive spaces is the Rescue Coordination Center simulator. Teams of students will be challenged to work together to coordinate a response to typical Coast Guard cases such as a major rescue at sea, a marine pollution incident, or a maritime law enforcement response

Throughout the entire STEM Learning Center, key experiences will be enhanced with hands-on Coast Guard opportunities to include communications, optics and lighting, engineering, seamanship, damage control, marine science (fisheries), marine science (environmental), and navigation. An example is an interactive marine science (fisheries) experience which not only explains the need for regulations, but permits the visitors to determine proper catch by using Coast Guard procedures and equipment.

FACILITY LOCATION AND DESIGN

The future Coast Guard Museum will be built in downtown New London, Connecticut on the historic Thames River waterfront. The Coast Guard has celebrated a presence in New London since 1791 and will incorporate the nearby Coast Guard Academy and USCG Research and Development Center in the Museum's story. Additionally, "America's Tall Ship", the Coast Guard Barque EAGLE will adorn the waterfront while home-ported at the New London City Pier adjacent to the Museum.

The Museum will allow the Coast Guard to display its vast collection of artifacts while affording engaging exhibits, a variety of programs, and highly interactive experiences to help ***bring the Coast Guard's history to life.***

The Museum design will include:

- State-of-the-Art exhibition galleries;
- World-class audio-visual theater and auditorium;
- STEM Learning Center with interactive experiences and education programs;
- Waterfront marina with access to active Coast Guard small boats and cutters, historic vessels, and national and international visiting maritime ships;
- Visitor access to existing downtown transportation hubs, and expansive river views with pedestrian walkways; and
- A virtual connection to the Coast Guard, its online collections, and other national and regional museums.

SPACE NEEDS

Current plans for the museum call for 70,000 square feet of space. The following table identifies the functional needs and priorities to be incorporated into the museum design.

National Coast Guard Museum Functional Needs and Priorities

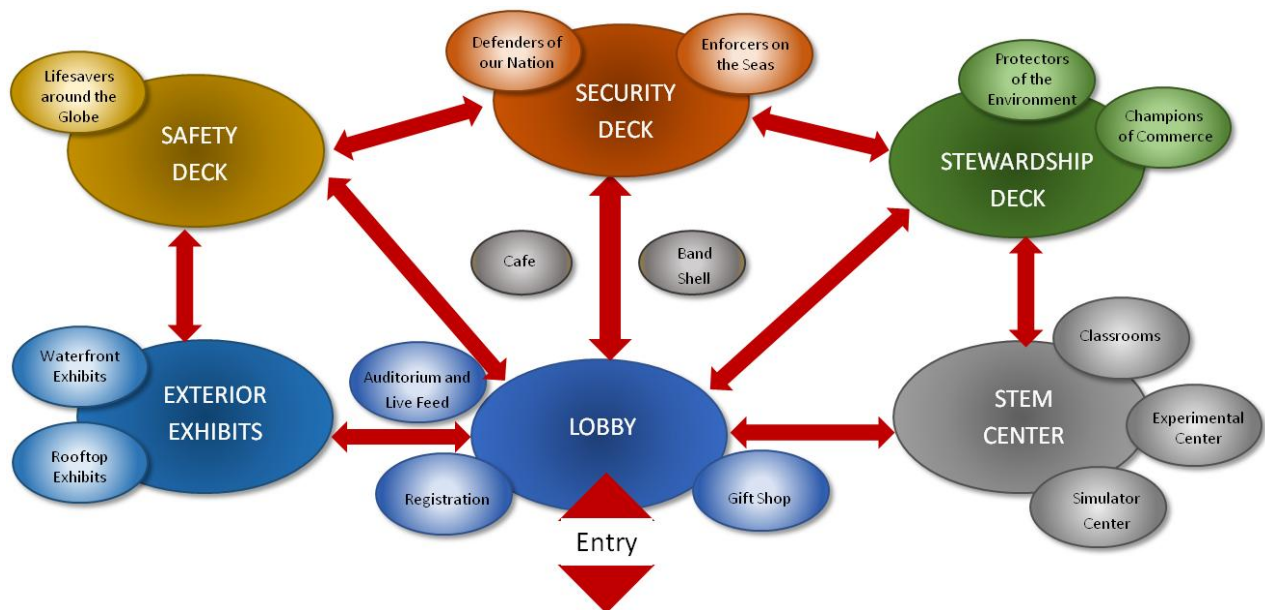
FUNCTIONAL NEED	PRIORITY	FUNCTIONAL NEED	PRIORITY
Entry Lobby with Admissions	Required	Memorial area	Optional
Multi-Function Theater/Auditorium	Required	Oral History area	Optional
Permanent Exhibit spaces (5 wings)	Required	Conference room	Optional
Rotating Exhibit spaces (1 wing)	Required	Museum Staff offices	Required
Event Area w/ adjacent Catering space	Required	Museum IT Support Staff room	Required
Café (restaurant)	Required	Museum Security office	Required
Gift Shop and Book Store	Required	Museum Staff/Docent break room	Required
STEM Center with Classroom	Required	Exhibit Assembly and Holding area	Required
Digital Library	Required	Maintenance/Mechanical space	Required
Children's Play area	Required	Loading Dock	Required
Simulator Center	Preferred	Rooftop exhibit space	Preferred

VISITOR FLOW

The museum building design is currently planned to have four levels. Visitors will arrive to a main entrance lobby and then be directed to the adjacent auditorium (theater) for a compelling multimedia experience that underscores the museum's main messages and provides an introduction to the Coast Guard. Visitors will then have the opportunity to select a tour preference (self directed or virtually guided) and then navigate freely from the lobby to galleries and other areas of interest within the museum.

The major galleries located on each deck and within thematic wings will include engaging "interactive moments" that will feature significant milestones and heroic stories drawn from all periods of Coast Guard history. The galleries will also be connected through a prominent timeline element that both reinforces the overall chronology and ties experiences presented in one gallery to those featured in another.

Hub and spoke flow concept



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EXHIBIT B

2020 Master Interpretive Plan

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NCGM MASTER INTERPRETIVE PLAN

31 March 2020

NATIONAL COAST GUARD MUSEUM MISSION

Support the Coast Guard mission by inspiring and engaging the general public and Coast Guard community to celebrate the Coast Guard men and women and their accomplishments, past, present, and future.

MUSEUM BUILDING/EXHIBIT MISSION

Establish a world class museum facility, exhibitions program, and waterfront experience that will attract domestic and international attention, bolster support for Coast Guard, and become a hallmark, repeat-worthy attraction.

VISION

Inspire, inform, and engage visitors by honoring the courage and skill of the men and women of the United States Coast Guard.

OBJECTIVES

1. Invigorate interest and bring Coast Guard history to life.
2. Engage and educate through art, artifacts, exhibits, interactive (analog/AV/VR/AR) and immersive experiences, as well as educational programs utilizing STEM, civics, arts and the most recent educational approaches – particularly those that are required national and Connecticut educational standards.
3. Transform perceptions and understanding through immersive interpretive experiences that involve diverse audiences with differing learning styles and varying degrees of Coast Guard familiarity.

VALUES

Helping others in service of society and nation.

PROJECT MESSAGES

CORE MESSAGE

United States Coast Guard members are *Lifesavers around the Globe, Champions of Commerce, Stewards of the Environment, Enforcers on the Seas, and Defenders of our Nation*. Team Coast Guard is a multi-faceted, mission-ready service with national and global impact that protects citizens and natural resources; facilitates, safeguards, and advances maritime commerce; and defends national interests in peacetime and in war.

**The information in this document is still in flux. Anything relying on this document for design, funding, or official submissions should make clear it is in flux and use high-level concepts, not “lock-in” the tactical level.*

PRIMARY MESSAGES

1. Since its founding in 1790, the Coast Guard has evolved into a nimble, maritime sea service with a unique identity, purpose, and tradition. Through steady pursuit of its many federal duties, the Coast Guard exemplifies its motto, *Semper Paratus* – Always Ready.
2. The Coast Guard is uniquely positioned to interact daily with Americans of all walks of life. It is embedded within communities, interconnected with industry, and is often the first to engage during emergency response. Family members also play a critical support role to Coast Guard members and the community.
3. The Coast Guard's Active Duty, Reserve, Civilian, and Auxiliary forces, comprised of remarkable individuals who are committed to excellence and advancing American interests, strive to reflect the diverse public they serve.
4. Coast Guard members stand the watch at home and abroad, embodying its Core Values of Honor, Respect, and Devotion to Duty.
5. The Coast Guard performs its many missions from land, sea, air, and space in constant partnership with federal, state, tribal, and even foreign partners. These relationships exemplify perseverance through any challenge and serve as a model for interagency and international collaboration.
6. Always seeking to improve, the Coast Guard relentlessly pursues innovation, inclusiveness, and advances in technology and research.

INTERPRETIVE GOALS

1. The National Coast Guard Museum will serve as the primary public face of Coast Guard and function as a critical tool for the Coast Guard, its leadership, and Communications outreach. It will demonstrate the value of the Coast Guard, and its abilities, to members of Congress, agency and foreign partners, and the public, enabling the Coast Guard to better serve its constituency.
2. Inspire Coast Guard members and the general public to appreciate the vital service and complex roles of Coast Guard men and women – past and present, increase retention and pride in current Coast Guard men and women, and encourage the public to follow in the footsteps of the many who serve with honor.
3. Elicit strong, positive emotional responses in Coast Guard members and the public which result in:
 - a) Awe and respect for the Coast Guard profession.
 - b) Sense of national pride.
 - c) Excitement to learn new information and stories about the Coast Guard.
 - d) Desire to return to the museum and recommend to others.

TARGET AUDIENCES

1. General public
2. Education groups
3. Coast Guard men and women – active duty, reserve, future members and those in training, veterans, auxiliary, civilians and families
4. Other government officials and agencies

MODEL MUSEUMS

1. National Army and Marine Corps museums
2. World War II museum

EXHIBIT “WINGS”

Exhibit spaces will include three major areas: Safety, Security, and Stewardship. These areas will include: Safety- Lifesavers around the Globe; Security - Enforcers on the Seas, Defenders of our Nation; Stewardship - Protectors of the Environment, Champions of Commerce. This is in addition to orientation and transition spaces.

MUSEUM BUILDING DIVISIONS

1. Deck
2. Wing
3. Gallery
4. Exhibit

ESSENTIAL MUSEUM SPACES

1. Atrium with suspended helicopter
2. Welcome/Information desk (*Welcome Center*)
3. Pedestrian bridge connector
4. Exhibition galleries: to include coverage, among others, of: Coast Guard station, air rescues, WWII, polar operations, breeches buoy, drug busts, and commercial marine inspections.
5. Rotating gallery
6. Theater/Program stage
7. Visitor lobby, café and gift shop
8. Public event space
9. STEM Discovery Center
 - a) Simulated Operations Center (*Command Center*)
 - b) Classroom (*Briefing Center*)
 - c) Gaming & Simulation Center
10. Quiet reflective Space (*Memorial Terrace*)
11. Public restrooms

**The information in this document is still in flux. Anything relying on this document for design, funding, or official submissions should make clear it is in flux and use high-level concepts, not “lock-in” the tactical level.*

12. Private nursing room

ESSENTIAL VISITOR PROGRAMS

1. Permanent exhibits:
 - a. Immersive and interactive/AV/VR/AR elements
 - b. Multi-generational learner stations
 - c. Coast Guard orientation movie
 - d. Interactive elements based on visitor's preferred path (rate, job) (*Qualification Experience*)
 - e. Simulated AV/VR/AR interaction with historical figures of the Coast Guard's past.
2. Rotating (temporary) exhibitions
3. Youth education programs
4. Adult education programs
5. Coast Guard programs for Coast Guard members, former and current
6. Coast Guard band performances
7. Visitor touring programs including docent led
8. Live and virtual interaction with current members of the Coast Guard
9. Private events with food and beverage services
10. Public Café food and beverage services
11. Omni-experience: Extension of museum and educational content to and from website and social media platforms

INCLUSION AND DIVERSITY CONTENT CONSIDERATIONS

1. Era: Past/Present/Future
2. Race/Ethnicity
3. Gender
4. Legacy services
5. Missions
6. Active/Civilian/Reserve/Auxiliary (include role of family)
7. Rank/Rate/Rating
8. Operational specialty
9. Geographic location

EXHIBIT C

2018 Museum Education Initiative Final Concept Report (Phase I)

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United States Coast Guard Future National Coast Guard Museum

MUSEUM EDUCATION INITIATIVE (MEI)

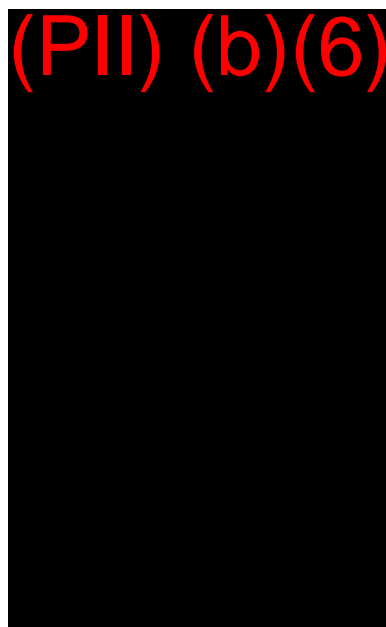
August 2017 through May 2018

FINAL CONCEPT REPORT (PHASE I)

May 31, 2018

MUSEUM EDUCATION COMMITTEE

(PII) (b)(6)



VISION FOR A FUTURE NATIONAL COAST GUARD MUSEUM

The National Coast Guard Museum Association in partnership with the United States Coast Guard is developing plans to construct a new 75,000 sq. ft. facility in downtown New London, Connecticut on the historic waterfront. The Coast Guard has celebrated a presence in New London since 1791, and will incorporate the nearby Coast Guard Academy and USCG Research and Development Center in the Museum's story. Additionally, "America's Tall Ship", the Coast Guard Barque EAGLE will adorn the waterfront while home-ported at the New London City Pier adjacent to the Museum.

We hold a bold and compelling vision for the future National Coast Guard Museum:

The Museum will allow the Coast Guard to display its vast collection of artifacts while offering engaging exhibits, a variety of educational programs, and highly interactive experiences...

to help bring Coast Guard history to life!

Exhibits and storylines will emphasize the Coast Guard's evolving roles as Defenders of our Nation, Enforcers on the Seas, Champions of Commerce, Protectors of the Environment, and Lifesavers around the Globe. Compelling stories will help bring attention to the remarkable acts of service by Coast Guard members; significant moments in our nation's history; and major innovations accomplished in science, technology, engineering, and math. The Museum will be free and open to the public.

TIMELINE FOR MUSEUM PLANNING, PROGRAMMING, AND DESIGN

Museum planners are in the final stages of schematic design. The following is a summary of the major efforts completed during concept and schematic design, and planned for the remainder of detailed design:

Date	NCGMA Advisory Efforts	NCGMA & USCG Professional Services
February 2016 – April 2017	Museum Exhibit Advisory Panel Preliminary Master Interpretive Plan	Architectural Conceptual Design Preliminary Master Interpretive Plan
August 2017 – March 2018	Museum Education Initiative (Phase I) Preliminary Concept Report	Architectural Conceptual Design Environmental Assessment Interpretive Design Contract RFP
March 2018 – May 2018	Museum Education Initiative (Phase I) Final Concept Report Museum Education Initiative (Phase II) Preliminary Concept Report	Architectural Schematic Design Interpretative Design Contract Award Supplemental Environment Assessment
June 2018 – 2020	NCGMA Advisory Panel	Architectural Detailed Design Creative Design Master Interpretive Plan Technology and Digital Strategy Beta Testing

PURPOSE OF THE MUSEUM EDUCATION INITIATIVE (MEI)

The National Coast Guard Museum Association (NCGMA), with the generous financial support from the Richard Lounsbery Foundation, is pleased to present this Concept Report for Phase I of the **Museum Education Initiative (MEI)**. The MEI was a six-month educational research and concept development project chartered to provide a blueprint for the enlightened museum visitor experience by defining the exploration options, learning objectives, and experiential components that are to be integrated into the next phase of detailed building design and interpretive planning for the future National Coast Guard Museum.

The Museum Education Committee focused its effort on the interests of student (youth) visitors ranging from pre-school (age 3) up through high school (age 18). It is estimated that 50,000 students will visit the National Coast Guard Museum each year as an individual or with a family, school group, or civic youth group.

RESEARCH AND CUSTOMER OUTREACH

To better understand this next generation of students and to begin establishing customer partnerships, the MEI Museum Education Committee completed its research and early inquiry in a collaborative fashion through a series of workshops and community forums. During these events, the Committee sought to: (1) learn best practices and current trends in museum education programming; and (2) better understand the needs of today's educators, students and youth groups.

Core Education Components (Voice of the Customer)

Between December 2017 and February 2018, the Museum Education Committee hosted three major workshops that included our Museum Education Advisory panel, a Regional Education forum, and a National Youth Club Leadership forum. Reports from these workshops are available as an additional resource in the digital archives. The following is summary of best ideas and essential elements to be integrated into the student visitor experience.

The student visitor experience will be:

- 1) A discovery adventure with inquiry based learning, problem solving, and a memorable outcome
- 2) An opportunity for live and virtual interaction with Coast Guard men and women
- 3) An extraordinary and unique experience which cannot be replicated in the classroom and is not found in other museums or science centers
- 4) Recognized as an added value that connects and builds on student learning outside the museum
- 5) Relevant to the student visitors interests and the physical world they live in
- 6) Extended and connected digitally via the internet and social media

Integrated into the museum galleries, exhibits, and program design will be:

- 1) Multisensory, interactive, and hands-on learning components
- 2) A digital strategy that makes smart use of both current and future technologies
- 3) Exciting stories that highlight the Coast Guard's importance to the nation and its heroic people
- 4) STEM and Inter-disciplinary learning objectives tied to academic standards and student interests
- 5) Individual learning to appreciate and develop strong personal values and essential life skills
- 6) Exportable components and resources that can be delivered to a youth group or classroom
- 7) Individual tracking, rewards, and incentive components to promote achievement and return visits

Core Education Components (Lessons from Museums)

As part of the project discovery phase, Committee members visited and researched nationally recognized museums and science centers to: (1) better understand and identify best practices for STEM education; and (2) learn new directions in the use of technologies that enhance the overall visitor experience.

Each member of both the Museum Education Committee and the Advisory Council met with (PII) (b)(6) at the Boston Museum of Science. The museum is recognized nationally and both are regarded as distinguished leaders in the field of STEM education and museum programming. A report from the museum visit is available as an additional resource in the digital archives. The following is a summary of key observations from the Boston Museum of Science field trip as well as examples of some best visitor experiences found at other museums:

Observations from the Boston Museum of Science:

- 1) Look at the world the CG operates in and tailor exhibits to better understand this world
- 2) Within every major exhibit, look for the creative way to integrate STEM into the CG story
- 3) Consider a large indoor marine lab to simulate extreme conditions of the CG operating environment
- 4) Make smaller labs mobile and modular to be set-up and broken-down quickly within a gallery space
- 5) Within the galleries, vary the duration of the visitor engagement from 30 seconds to 5 minutes
- 6) Pose provocative questions to engage museum visitors
- 7) Provide a public space for new exhibit proof-of-concepts to include visitor reactions and feedback
- 8) Test every new exhibit concept with four important questions:
 - a. What is the BIG IDEA?
 - b. How does the exhibit convey the BIG IDEA?
 - c. Is it GREAT?
 - d. Will it LAST?

Other museums with examples of best student visitor experiences:

- 1) WWII Museum – *Dog Tag Experience* and *Electronic Fields Trips* for students and educators
- 2) Eli Whitney Museum – *Water Lab*, and the *Leonardo Project* and *Leonardo Challenge* for students
- 3) US Holocaust Memorial Museum – *Identification Card Experience* and online education resources
- 4) Bridgeport Discovery Museum – *Challenger Center Missions* and *Science On a Sphere (SOS)* Exhibit
- 5) Connecticut Science Center – *Discovery Center* programs and *Science in Motion* traveling programs
- 6) National Archives – *Learning Lab* programs, the *National History Day* contest, and online resources
- 7) Mystic Seaport – K-12 experiential and virtual programs

Core Education Components (Voices from the Coast Guard)

In addition to museum tours, Committee members also met with active duty Coast Guard men and women while touring the Coast Guard base in Boston, Massachusetts. The tour was instrumental in learning how the future Coast Guard Museum may showcase the exciting stories and the heroic men and women of the Coast Guard... to help create the **enlightened visitor experience**. The following is a summary of observations and best ideas voiced by the men and women in the Coast Guard.

Museum designers should consider recreating or simulating:

- 1) a rescue coordination center to exercise teamwork and conduct operational scenarios
- 2) a maritime environment lab to experience all weather conditions at sea and around the globe

- 3) a major cutter engine room to exercise engineering casualties
- 4) a small boat coxswain and surfman rescue at sea
- 5) a helicopter aviation rescue at sea
- 6) the working components of a lighted buoy with a mooring chain heat-and-beat challenge

Crew members also suggested museum galleries showcase the day-in-the-life, both past and present, of an enlisted person. Exhibits and storytelling should highlight the unique military lifestyle, commitment and sacrifices made, and the rewards and satisfaction while standing duty as sea, in the air, and on land.

STUDENT EDUCATION OUTCOMES, GOALS, AND EXPLORATION OPTIONS

Student Education Outcomes

Young visitors will become tomorrow's critical thinkers, problem solvers, innovators, and future leaders of our Nation.

Student Education Goals

By including a STEM-focused approach to the overall museum design and visitor experience, the future National Coast Guard Museum will leverage K-12 programming, expert speakers, virtual shipmates, operational platforms, engaging museum exhibits, modern exploration laboratories, and interactive experiences and simulations to support three primary goals with STEM:

- 1) **Engage and Inspire:** Create an enjoyable and stimulating learning environment that promotes social interaction and heightens student interest, curiosity, and confidence in continued learning.
- 2) **Support Learning:** Develop a continuum of learning experiences that increase in complexity and provide opportunities for students to improve knowledge and understanding of concepts.
- 3) **Empower Careers:** Inspire increased understanding and interest in associated careers, to include potential careers in the maritime and aeronautic industries, and in the United States Coast Guard.

Exploration Options

Working with expert educators and creative museum designers, the Museum Education Committee identified exploration options that would best achieve our desired student education goals and outcomes.

A. Virtual Shipmate Program: In addition to meeting live docents, the individual student visitor may encounter a Virtual (technology depicted) Shipmate and potential Coast Guard character reenactors. While the target audience is students, adults may also participate. Representing the diversity of our Coast Guard workforce throughout its history, the Virtual Shipmates will tell stories, define character, demonstrate the challenges of their era, introduce innovations within their mission, and encourage visitors to explore and discover the richness of the Coast Guard Museum. Each Virtual Shipmate will be programmed to engage and inform the visitor in his or her personal career and life experiences, to include:

- 1) Period of Service
- 2) Component of the Service
- 3) Legacy Service Connection
- 4) Historical Significance to the Service
- 5) Character and Core Values in Action
- 6) Leadership Contributions
- 7) Innovations and Connections to Science, Technology, Engineering and Math (STEM)

- 8) Technical or Operational Expertise
- 9) Family Heritage, Race, Culture
- 10) Personal Interest Story
- 11) Connection to Today's CG

With the aid of a mobile application or digital gateways (interactive computer screens), the Virtual Shipmate may guide the visitor to areas of the museum based on his or her interests.

- 1) Aviator
- 2) Aviation Rescue Swimmer
- 3) Boat Coxswain
- 4) Boat Surfman
- 5) Cutterman
- 6) Engineer
- 7) Lighthouse Keeper
- 8) Lifesaving Station Keeper
- 9) Marine Inspector
- 10) Port Security Unit (PSU) Gunner

Additional user features of the program that should be considered in future technical solution(s) include:

- 1) When a visitor is standing near a gallery exhibit or a digital gateway that features a designated Virtual Shipmate, the visitor will be prompted to select the respective Virtual Shipmate to interact for continued learning, serve as a virtual guide, or to prompt the student to explore an individual qualification in the related career specialty.
- 2) After the museum visit, the visitor will be able to stay connected to the Virtual Shipmate through social media, mobile application, or the museum website.

B. Individual Qualification Program: The individual student visitor may choose to pursue a simulated Coast Guard Qualification. The primary audience for the simulated Coast Guard Qualification program is youth ages eight to 16, and may be a family group. The qualification process will be constructed broadly around three levels of difficulty (mastery levels), and although targeted for students, adults are also expected to participate. The mastery levels allow visitors to select and move across boundaries as appropriate for the individual participant's own interest, knowledge, and learning ability.

This 2-3 hour qualification program is designed to introduce the visitor to Coast Guard operational specialties, significant moments in history, STEM connections, and heroic figures (past and present). Coast Guard operational specialties considered ideally suited for the Individual Qualification program include:

- 1) Aviator
- 2) Boat Coxswain
- 3) Marine Inspector
- 4) Navigator
- 5) Pollution Response Technician
- 6) Rescue Coordinator
- 7) Shipboard Engineer

Each qualification will vary by operational specialty and mastery level. For each qualification, the learning objectives will include an introduction to the people, events and technology associated with the specialty; and a deeper dive into age appropriate STEM topics related to:

- 1) Communications
- 2) Engineering
- 3) Law & Regulations
- 4) Marine Environment
- 5) Maritime Industry
- 6) Navigation
- 7) Operations
- 8) Weather

The program will expose students to multiple areas and experiences within the museum while mirroring Coast Guard training and education techniques, to include:

- 1) Knowledge-based prerequisites that will direct the visitor through the Museum Exhibits
- 2) Provocative questions that will direct the visitor to a Virtual Shipmate
- 3) Hands-on demonstrations that will be accomplished in the Exploratory Laboratories
- 4) Culminating experiences in the Simulation and Gaming Center

Finally, those who complete a qualification will receive some form of recognition (e.g. a certificate, patch, or insignia) and have their achievements recorded in an electronic database. Follow-on educational programs (virtual and on-site) may be offered to maintain interest and increase student proficiency.

C. Group Education Program: The Museum is partnering with K-12 school districts, regional Magnet Schools, and youth groups to leverage STEM programming by complementing traditional school learning with experts, discussions, operational platforms, hands-on museum exhibits, exploration laboratories, interactive experiences, virtual technologies and simulations. Unique Coast Guard scenarios are being developed which will complement education and non-traditional classroom settings such as a Coast Guard Rescue Coordination Center.

Students visiting as a member of a school class or youth group will be enrolled into an education program designed to satisfy the sponsor's learning objectives and time schedule. Education user groups expressed a strong interest in short-term (daily visits), long-term (multi-day with overnight visits), remote virtual engagements, and sustained interactions between visits. These Student and Youth groups plan to visit for:

- 1) Field trips or programs that serve a consistent group of enrolled participants and have a particular focus or set of learning goals;
- 2) Camps that occur over summer break, during school breaks, or over a weekend that offer unique interactive experiences and multi-day sequence of hands-on activities that are not available in the school classroom or at other regional museums and science centers;
- 3) Individual exploration experiences in which students create their own investigations and inquiry through longer-term opportunities over the course of a school year;
- 4) Interactive gaming or problem solving activities that promotes youth-driven playing, making or tinkering.

Educators expressed their desire for the future National Coast Guard Museum to offer unique and complementary learning that will engage students in meaningful, relevant learning experiences that lead to

lasting understanding, real world application, innovation and creativity (e.g. a water tank that permits students to examine buoyancy through math application, otherwise not available to students in a classroom setting). Building on these essential elements, group education programs will be designed to support and be aligned with Student 21st Century STEM learning standards and Youth Group STEM learning objectives having lessons that:

- 1) Focus on real-world (Coast Guard Scenarios) issues and problems
- 2) Are guided by a problem-based learning (PBL) approach
- 3) Immerse students in hands-on inquiry and open-ended exploration
- 4) Involve students in productive leadership and teamwork (CG Core Values)
- 5) Apply interdisciplinary subjects relative to regional curriculum
- 6) Allow for multiple right answers and provocative questions as a necessary part of learning

Educators are hopeful the museum will offer new opportunities to introduce students to exciting Coast Guard stories to help connect students to real-world STEM applications and diverse career interests, which may include:

- 1) Aeronautical, Civil, Marine and Mechanical Engineering
- 2) Aviation Principles and Technologies
- 3) Communications
- 4) Computer Coding, Encoding, and Decoding
- 5) Emergency Medical response and Survival at Sea
- 6) Global Maritime Environment
- 7) Icebreaking Technology
- 8) Information Technology and Computer Science
- 9) Lethal and non-lethal Weapons and Technologies
- 10) Marine Transportation System and Aids to Navigation Technologies
- 11) Nautical Science and Navigation
- 12) Oceanographic Research and Environmental Science
- 13) Oceanography, Weather and Forecasting
- 14) Polar Research and Exploration
- 15) Pollution Response Technologies
- 16) Rescue and Response Coordination
- 17) Robotics and Drone Technologies
- 18) Seamanship, Piloting, Sailing and Boat Rigging
- 19) Search and Rescue Technologies
- 20) Ship Stability and Buoyancy

As described by (PII) (b)(6) member of the Museum's Advisory Council and author of "The Museum Manager's Compendium"; "the museum's unique approach to learning is to build student innovation skills by looking at historical innovations in their social contexts using collection objects surrounded by interactive activities and encouraging students to invent their futures by engaging them in the community's current challenges and opportunities."

Additionally, “there is a logical sequence the museum’s exhibits, theaters, and programs can follow to build student innovation skills: first engage their *curiosity*, which hopefully leads to *investigation*, ideally resulting in a *discovery* (an Aha! Moment), which over time, and if properly nurtured, can lead to *invention* and *innovation*.” To ensure education programs inspire, engage, and challenge students; the future museum will offer:

- 1) Guest speakers, live demonstrations, and movie films in a multi-function Theater/Auditorium
- 2) Interaction with Gallery Exhibits and Discovery Stations (located within the five exhibit wings)
- 3) Individual and group exercises in the Interactive Learning Center and Exploration Labs
- 4) Individual and group challenges in a Simulation and Gaming Center
- 5) Coordinated team challenges and exercises in the Rescue Coordination Center
- 6) Physical group and team activities in an activity space (temporarily created in the Event Center)
- 7) Access to Operational Units and Waterfront Attractions

In support of the future National Coast Guard Museum’s mission to connect and add to the rich museum fabric that already exists across America and around the globe, museum designers should plan for advanced technologies to allow live streaming and virtual collaboration. By extending the museum’s reach beyond the building walls, the National Coast Guard Museum aims to advance the important missions and the challenging issues that face our Coast Guard and our nation.

MUSEUM COMPONENTS

In support of the overall student visitor experience; the following museum components are to be further defined in the future National Coast Guard Museum’s space and exhibit design:

A. STEM Center

- 1) An **Interactive Learning Center** within the STEM Center will entertain and inspire school groups, team challenges, CAMP-ins, K-12 programming, special needs visitors, and homeschoolers. The Center will develop interactive classroom sessions that invoke exciting Coast Guard stories and connect to real world application of STEM concepts.
- 2) **Exploration Laboratories** within the STEM Center will host student groups for instructor led programs. Combining lectures, demonstrations, and story-telling with hands-on student exploration is a proven method to reinforce the subject material. **Discovery Stations** will also be integrated throughout the museum to extend STEM learning to the major exhibit spaces (wings and galleries) and to offer individual and small group self inquiry and discovery.
- 3) A **Simulation and Gaming Center** will enable visitors to experience real world Coast Guard operations simulated in an aircraft cockpit, a ship’s bridge, or a boat coxswain steering station. The simulators will be designed to be networked to offer a variety of challenges with variable degrees of difficulty for individual and small group play.
- 4) Within the STEM Center, a **Rescue Coordination Center** will be designed to simulate a modern-day or future Coast Guard Rescue Coordination Center. Teams of students will be challenged to work together to coordinate a response to typical Coast Guard cases such as a major rescue at sea, a marine pollution incident, or a maritime law enforcement response. A group breakout space located adjacent to the Rescue Coordination Center will allow pre and post exercise briefing to enhance the overall learning experience.

B. Additional Student Visitor Components

- 1) Near the entrance to the museum, a state-of-the-art multi-function **Theater/Auditorium** will be accessible to school classes and youth groups to allow guest speakers; live demonstrations; and showing of movies, video clips and live feeds via the internet.
- 2) At the entrance to the museum, a **Visitor Registration** area where visitors may choose a Virtual Shipmate or an Individual Qualification.
- 3) Within the museum, the **Event Center** will serve as a multi-use space to accommodate large student group educational activities, physical activities, ceremonies, and lunch seating.
- 4) Adjacent to the museum, **Waterfront Attractions** available for students climbing and hands-on exploration of Coast Guard boats, cutters, and historic vessels.
- 5) Beyond the museum, a **Virtual Connection** to the Coast Guard, its online collections, and other national and regional museums.

FUTURE ACTIONS AND RECOMMENDATIONS

This report is intended to guide and inform the Building Architect and Creative Designer. While this report defines preliminary concepts for the student visitor education, qualification and virtual shipmate programs; the Museum Education Committee recommends expanding the programming to include adults and early learning, specifically a Phase II of the MEI to develop concepts for:

- **Early Learning Programming:** An early learning center shall be explored to engage preschoolers through age appropriate challenges around Coast Guard missions, and allow them to gain exposure to math and STEM based concepts.
- **Adult Individual Programming:** Seminars, symposia and workshops shall be explored to complement the regions collaboration with the military, industry, maritime environment, leadership and professional development, and STEM. Additionally, an evening speaker series, focused on lifelong learners, may be featured in the Museum auditorium, attracting regional, national and international educators, innovators and subject matter experts.
- **Adult Group Programming:** An evening adult group program, possibly centered on leadership program shall be explored which may engage civic, industry, education, and military leaders. The leadership laboratory experience will challenge participants to plan and respond to Coast Guard real life scenarios.

This final report shall reflect individual and group programming for all age groups as shown below:

Target Age Group	Individual Programs	Group Programs
Pre-School (Ages 3-5)	<i>Phase II programs</i>	<i>Phase II programs</i>
Youth (Ages 6-17)	Virtual Shipmate & Individual Qualification	Group Education
Adult (Ages 18 and older)	Virtual Shipmate plus <i>Phase II programs</i>	<i>Phase II programs</i>

The Museum Education Committee anticipates completing Phase II deliverables for early and adult education programs by the end of May 2018 and will incorporate these early concepts as an addendum to this report.

With the USCG museum exhibit design contract also set to be awarded in June of 2018, the NCGMA intends to form a Museum Advisory Panel to continue supporting the Building Architect and Creative Designer throughout the duration of detailed design and interpretive planning.

Working in partnership with the United States Coast Guard, the National Coast Guard Museum Association remains optimistic and fully committed to building a national museum to **honor** our Service and **engage, educate, and inspire** a new generation of leaders!

ACKNOWLEDGEMENTS

(PII) (b)(6)

Museum Education Initiation (MEI) Sponsors:

(PII) (b)(6)

United States Coast Guard
National Coast Guard Museum Association

Museum Advisory Panel Members:

(PII) (b)(6)

Payette
LEARN Regional Education Service Center
United States Coast Guard Academy
United States Coast Guard Veteran
United States Coast Guard Research and Development Center
White Oak
Payette
Unified Field
United States Coast Guard Auxiliary
Sikorsky Aircraft
United States Coast Guard Auxiliary

Museum and Education Contributors:

(PII) (b)(6)

Fitch High School, Groton
Abraham Pierson Elementary School, Clinton
Stonington High School, Stonington
Boston Museum of Science
Ledyard Public Schools, Ledyard
Mystic Seaport Museum, Mystic
Dual Language and Arts Magnet Middle School, Waterford
Junior Achievement of Southwest CT
Catherine Kolnaski Magnet School, New London
Science and Technology Magnet High School of SE CT, New London
East Lyme High School, East Lyme
ISAAC Interdistrict School for Arts and Communication, New London
LEARN Regional Education Service Center

(PII) (b)(6)

Girl Scouts of America
East Lyme Middle School, East Lyme
The Morgan High School, Clinton
Jared Eliot Middle School, Clinton
East Lyme Middle School, East Lyme
Mystic Seaport Museum, Mystic
Catherine Kolnaski Elementary Magnet School, Groton
Mary Morrisson Elementary School, Groton
USN Sea Cadets
USN Sea Cadets
Boston Museum of Science
USAF Civil Air Patrol
Girl Scouts of America
Mohegan Tribal Gaming Authority, Norwich
Marine Science Magnet High School, Groton

Coast Guard Contributors:

(PII) (b)(6)

USCG Sector Boston
USCG Station Boston
USCG Sector Boston
USCG Sector Boston
USCG Station Boston
USCGC Reef Shark
USCG Sector Boston
USCG Base Boston
USCG Sector Boston
USCG Base Boston

SOURCE DOCUMENTS

(PII) (b)(6)

White Oak, *The Museum Manager's Compendium: 101 Essential Tools and Resources*, 2017
White Oak, *National Coast Guard Museum Strategic Master Plan, Addendum 2017*
UnifiedField, *A Framework for 21st Century Culture*, 2017
UnifiedField, *The NCGM: Museum Education Initiative Findings Report*, 2017
NCGMA Grant Proposal for the Richard Lounsbery Foundation, 2017
NCGMA Preliminary Master Interpretive Plan, 2017
MEI Charter, 2017
MEI Guiding Document, 2017
MEI Museum Advisory Council Kickoff Meeting Minutes, 2017
MEI Museum Education Committee Presentation Slides, 2018
MEI Youth Education Forum Minutes, 2018
MEI Youth Leadership Forum Minutes, 2018
MEI White Paper for Education Program, 2018
MEI White Paper for Qualification Program, 2018
MEI White Paper for Shipmate Program, 2018

EXHIBIT D

2018 Museum Education Initiative Final Concept Report - Addendum (Phase II)

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United States Coast Guard

Future National Coast Guard Museum

MUSEUM EDUCATION INITIATIVE (MEI)

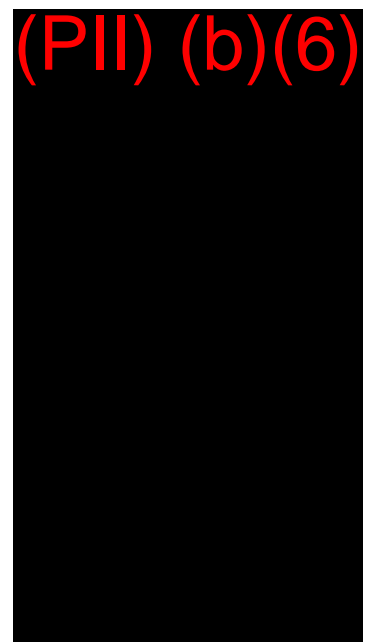
August 2017 through May 2018

FINAL CONCEPT REPORT (PHASE II) - ADDENDUM

May 31, 2018

MUSEUM EDUCATION COMMITTEE

(PII) (b)(6)



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PREAMBLE

This Preliminary Concept Report (Phase II) Addendum is intended to guide and inform the Building Architect and Creative Designer of preliminary concepts for Early Learning and Adult Education programs to be offered by the future National Coast Guard Museum. This report supplements the information provided in the NCGMA Preliminary Concept Report (Phase I) that defined preliminary concepts for the student education, visitor qualification, and virtual shipmate experience.

The following goals were established for this phase of the Museum Education Initiative:

- 1) **Early Learning Programming:** An early learning center shall be explored to engage preschoolers with age appropriate challenges around Coast Guard missions, and allow them to gain exposure to early life skills, personal values, and STEM based concepts.
- 2) **Adult Individual Programming:** Conference, symposia, and speaker series shall be explored to complement the regions collaboration with military, industry, academia, museums and libraries. These programs are envisioned to attract regional, national and international educators, innovators and subject matter experts.
- 3) **Adult Group Programming:** Workshops centered on leadership and professional development shall be explored which may engage civic, industry, education, and military leaders.
- 4) The guiding principle for the Museum is to offer education programs that connect to the Coast Guard's military and maritime heritage; are "relevant" to issues of regional and national interest; and are "unique, complementary, and non-redundant" to the institutional missions and the existing events and programs found in Southeastern Connecticut.

The concepts provided in this Preliminary Concept Report (Phase II) Addendum will be added to earlier concepts outlined in Phase I to reflect individual and group programming for all age groups as shown below:

Target Age Group	Individual Programs	Group Programs
Pre-School (Ages 3-8)	Early Learning (2)	Early Learning (2)
Youth (Ages 8-17)	Virtual Shipmate (1) USCG Qualification (1)	STEM Education (1)
Adult (Ages 18 and older)	Virtual Shipmate (1) Speaker Series (2)	Conference & Symposiums (2) Leadership & Professional Development (2)

(1) Programs described in the Concept Report (Phase I) dated May 13, 2018

(2) Programs described in this Concept Report (Phase II) Addendum

The NCGMA intends to form a Museum Advisory Panel to continue supporting the Building Architect and Creative Designer throughout the duration of detailed design and interpretive planning.

Working in partnership with the United States Coast Guard, the National Coast Guard Museum Association remains fully committed to building a national museum to **honor** our Service and **engage, educate, and inspire** a new generation of leaders!

EARLY LEARNING OBJECTIVES

The National Museum aims to offer a playful learning experience where early learners (children under age 8) can explore, create, discover, interact, experiment, make connections, and develop critical thinking skills.

The National Museum will design education programs so early learners describe the museum as a magical world where they experienced a fun and playful adventure. Children will realize playful learning, creating, and building is fun. At the same time, children will gain a first impression of the Coast Guard to believe:

- 1) Coast Guard men and women are rescue and response super heroes
- 2) Coast Guard men and women help people and the marine life on and in the water

Early elementary children (ages 6-8) will expand their learning to appreciate and believe:

- 1) She or he could someday be a Coast Guard hero
- 2) Life at sea, in the air, and on the water is fun
- 3) Coast Guard life is unique and special for children and families
- 4) There are no boundaries or norms and that Coast Guard and STEM careers are possible for anyone
- 5) The Coast Guard is on every coast, every shoreline, every island, and every community
- 6) Honor and pride comes with serving the Coast Guard and these United States of America

EARLY LEARNING BEST PRACTICES

There are many examples of early learning education programs that can help inform the design of programs for the future National Coast Guard Museum. The following is a list of some of the best local and regional museums and science centers and their respective award-winning programs.

- 1) Bridgeport Discovery Museum – *Interactive STEM* programs
- 2) Connecticut Science Center – *Storytime for Kids* programs
- 3) Imagine Nation – Three floors of twelve *Interactive Studios*
- 4) New England Science & Sailing – *Sailing, Marine Science, and Outdoor Adventure* programs
- 5) Mystic Aquarium – *Sea School* preschool programs
- 6) Mystic Seaport Museum – *Experiential* and *Virtual* programs with online *Teacher Lesson Plans*

EARLY LEARNING PROGRAMS

Members of the Museum Education Committee hosted an early education forum to better understand the needs and interests of early educators. This section presents a summary of the target audience, early learning objectives, major themes, visitor experiences, accessibility, communications, partnerships, and other considerations for early learning program designers.

Target Audience

- 1) Families (and extended family) with children under the age of 8 years
 - Includes parents, guardians and grandparents with children.
- 2) Small Groups with children under the age of 8 years
 - Includes home daycare groups, home school groups, and special needs groups.

Early Learning Objectives

- 1) Serving others, empathy and compassion
- 2) Core values: honor (integrity), respect, devotion to duty (perseverance)

- 3) Geography and the national maritime landscape
- 4) American history and the growth and evolution of our nation
- 5) Teamwork and decision making
- 6) Self inquiry
- 7) Safety, rules, and personal responsibility

Major Themes for Early Learning Workshops

- 1) Engineering and Innovation – boats, aircraft, lighthouses
- 2) Marine Environment – living resources, weather and oceanography, marine pollution and protection
- 3) Marine Transportation – modes of transport, major cargos, import/export, economic value/efficiency
- 4) Safety at Sea – search and rescue, aids to navigation, vessel rules and regulations, mariner licensing

Accessibility

- 1) Fit and scale exhibits targeted for early learners (birth to 8 yrs).
- 2) Transportation and logistics expense for local visitor groups is challenging. Could museum provide?
- 3) Offer traveling exhibits to travel visitor centers or other museums/libraries to increase access and extend the museum beyond Southeastern Connecticut.
- 4) Extend the museum using virtual exhibits and exporting resources to the classroom and children homes.
- 5) Host skype and live feed of active Coast Guard people and projects around the globe.
- 6) Design early learner engagement within every major gallery; exhibit spaces integrated for all ages.
- 7) Provide an interactive traveling exhibit booth for local school events.

Communications

- 1) Newsletters to schools
- 2) Live streaming to the web/classrooms
- 3) Museum app with other social media apps

Physically Interactive/Challenges

- 1) Important for developing fine motor skills and hand-eye coordination
- 2) Scale size: ship control and towing; helicopter flight and rescue basket deployment; boat launch, recover, rescue, and navigate; lighthouse lantern inspection and repair.
- 3) Design “child” controls to simulate real coast guard world, missions, and careers.
- 4) Include scavenger hunts to find heroes, lighthouses, life saving stations, cutters/boats/aircraft linked to geographic locations.
- 5) Allow climb aboard, around, up and down (e.g. anchors, small boats, jacob’s ladder, helicopters, lighthouse lantern room, ship’s bridge, engine room and control center).
- 6) Offer mom and me programs to encourage water safety, wearing of life jackets, and rescue dogs.

Early Career Focus

- 1) Offer Youth Qualifications (age 3-8) focusing on helping others: life rescue (aviator and boat coxswain); protecting living marine resources (marine inspector); aid to navigators (lighthouse and lightship tender).
- 2) Enable dramatic dress up and pretend (role play) nautical customs with uniforms and mission accessories.
- 3) Stage photo booths with mission profiles to reflect qualification specialties.
- 4) Provide museum activity guides and/or passports to keep and carry record of achievement/progress.
- 5) Reward children’s efforts and accomplishments with stamps/stickers.

Early Values and Culture Focus

Develop/reinforce early values... fitness, follower orders, play by the rules, delayed gratification, respect others and the power of the sea, empathy (survivor perspective), water safety.

Building/Tinkering/Experimenting/Demonstrations

- 1) Design, build, test, and deploy pollution response boats and booms.
- 2) Make-and-take away toy boats, icebreakers, buoy tenders, and helicopters.
- 3) Lego design and build.
- 4) Marine basin with remote control boats, navigating waterways with channel markers (water maze)
- 5) Virtual boat and/or aircraft experience in high winds, varying sea states, freezing sea spray, and sea ice.
- 6) Sensory touch tables.
- 7) Seaweed, coastal shell fish, sea birds, ocean farming.
- 8) Pollution, impact, and cleanup efforts for oil spills, household chemical/plastics.
- 9) Computer coding activities.
- 10) Coast Guard common equipment and tools (toy replica).
- 11) Air rescue, rescue swimmers, rescue dogs.
- 12) Boat port security operations.

Partnerships

- 1) Collaborate with youth non-profits, museums, libraries and educators.
- 2) Complement existing regional events, programs, and institutional missions.

EARLY LEARNING CENTER

Planners for the National Coast Guard Museum envision a dedicated state-of-the-art space (early learning center) that will gain national attention as an innovative learning lab for children. The lab will support programs having both a Coast Guard and STEM focus. The overall goal for the early learning center is to excite and engage children while providing a comfortable space for parents, guardians, and grandparents.

Major Features

- 1) Marine basin for modeling missions, geographic features, and surface assets
- 2) Deck globe with views of the oceans, seas, rivers and lakes around the nation
- 3) Audio/video capability with recording and playback
- 4) Communication, coding, signaling station
- 5) Simulated ship bridge with video programming (scaled to children)

Additional Amenities for Early Learners

- 1) Outside picnic tables, sitting areas, walking discovery path, adjacent family bathroom
- 2) Inside eating area, sitting areas, coat and backpack stowage
- 3) Family Bathroom Considerations
 - Variable height sinks or step up platforms with paper towels (loud air-dryers scare kids)
 - Toilets with manual flush (auto-flush toilets scare kids)
 - Infant changing tables
 - Adjacent sitting lounge and privacy for infant feeding

ADULT EDUCATION GOALS & OBJECTIVES

The National Museum aims to increase visibility, raise awareness, and promote innovative solutions to current issues of national interest within the maritime environment.

The National Museum will bring attention to the Coast Guard, its roles and contributions to the nation; global maritime issues; heroic Coast Guard people; and the national character and core values of Coast Guard and military leaders – past, present and future.

The National Museum will bring attention to the local historic lighthouses and active Coast Guard units (USCG Academy, Leadership Development Center, Research and Development Center, Station New London, Sector New Haven, and the USCGC Eagle) and their role within the Southeastern Connecticut region – past, present and future.

The National Museum will be recognized as an exciting, innovative, and immersive environment that provides an enriched learning experience using live demonstrations, historical objects, interactive exhibits, state-of-the-art simulation/gaming exercises, physical real-world coast guard experiences, and live/virtual access to Coast Guard units and active duty personnel.

ADULT LEADERSHIP & PROFESSIONAL DEVELOPMENT

Members of the Museum Education Committee hosted an adult leadership and professional development forum to better understand the needs and interests of adult educators and industry leaders. This section presents a summary of the vision, target audience, types of programs, partnerships, and design considerations for adult leadership and professional development program designers.

Leading the Coast Guard Way

The Coast Guard is recognized as having *leaders of character* who are called upon to honorably serve in war, to lead and respond during a national maritime disaster, and to save those in peril in the sea. The NCGM will be uniquely positioned to honor these leaders of character and to instill the Coast Guard's leadership culture, character, values, and principles to individuals and teams to quickly transform best practices to real world application in a government organization, a business environment, or an educational setting.

What is the Coast Guard's way to building Leaders of Character?

- 1) Coast Guard's motto *Semper Paratus* (always ready) translates to effective preparation, planning, and response.
- 2) Coast Guard's values (honor, respect, and devotion to duty) guide the leader's behaviors in the framework of a multi-mission organization – from humanitarian life saver, to national defense, to maritime law enforcement, to environmental steward.
- 3) Coast Guard reflects the nation's history and character; key stories can be used to showcase the Coast Guard as leaders of character to demonstrate the core values and best leadership practices in real world and challenging situations.
- 4) Coast Guard culture of service to the nation, servant leadership, equal opportunity, and a great deal of teamwork.
- 5) Life's greatest lessons can be learned at sea: Calm in the storm ~ leading through a crisis; Adopt a deep respect and mindset to place crew and others over self.
- 6) Leadership is representative of the seven principles of operation: unity of effort, flexibility, on scene initiative, restraint, clear objective, effective presence, and managed risk.

- 7) Coast Guard's bias for action and response condition allows leaders to operate effectively in a volatile, uncertain, complex, and ambiguous (VUCA) environment.

Target Audience

- 1) Business and industry leaders
- 2) Non-profit organizational leaders
- 3) Educators and administrators
- 4) Healthcare leaders
- 5) Emergency responders
- 6) Crisis action teams
- 7) Young and emerging professionals
- 8) Virtual outreach -national presence, online integrated, interactive and experiential outside of the museum

Types of Group Leadership Programs

- 1) Immersive team command, control, and coordination scenarios to mirror a command center or rescue coordination center operation, designed to simulate real CG experiences that apply the seven principles of leadership with varying levels of risk and complexity.
- 2) Engaging Film, Speakers, and Live Guests from the Coast Guard and Maritime Industries (see early concept themes and topics for the speaker series.
- 3) Train the trainers in Leadership and Teamwork: Engaging educators to be leaders to meet today's changing and uncertain environments; and providing teachers with the competencies to help their students become better citizens, future leaders, and more effective team members.
- 4) Immersive and physical individual and team challenges that simulate high risk operations in the maritime environment (e.g. downed helicopter survival at sea, lifeboat survival at sea, rescue swimmer drop from a helicopter, helicopter basket deployment and retrieval in severe weather, small boat launch and recovery in a surf, setting/dousing/furling sail as a team in the rigging of tall-ship Eagle during a storm).
- 5) Related scavenger hunt engagement that guides participants throughout museum exhibits to enhance learning using historical events, objects, artifacts, and personal stories.

Design Considerations for Group Leadership Programs

- 1) Use Coast Guard moments in history to tell the CG story while showcasing leadership in action.
- 2) Blended 4-hour classes that may include film, speaker, live demonstration, gallery walk, and a culminating team challenge (simulation/gaming scenario or a physical operational experience).
- 3) Simulations/Gaming scenarios (up to 2 hours), conducted in a realistic command and control environment, that progress in complexity and level of difficulty with the opportunity to receive, disseminate, and analyze information; develop recommendations and make decisions; assign and deploy resources; assess outcomes and overall results; and identify lessons learned.
- 4) Simulate operations with high risk and complex problems in the maritime environment.
- 5) Experiential Leadership Methods – challenge (apply), support (feedback), and assess (reflect).
- 6) Advanced Learning Environment (ALE) that includes live, virtual, and constructive (LVC) environments.
- 7) Pre and Post program content to extend the engagement and deepen the experience.
- 8) Filmed live screening and virtual real-time access to operational units and active duty Coast Guard.

Partnerships

- 1) Collaborate with USCG units, museums, libraries, educators, and maritime defense industries
- 2) Complement existing regional events, programs, and institutional missions

ADULT SPEAKER SERIES

To complement the Adult Leadership and Professional Development Programs, the National Coast Guard Museum can offer an Adult Speaker Series (e.g., *Maritime Innovation Lecture Series*) leveraging the opportunities the Coast Guard has to bring interesting and relevant topics to the region and to the American public.

Adult Professional Organizations and Coast Guard Topics of National Interest

- 1) Maritime Naval Architecture, Marine Engineering and Aviation Engineering presented by military (USCG & USN), industry (Electric Boat and Sikorsky), academia (Service Academies, Webb Institute, Maritime Academies, and the USCG Research and Development Center.
- 2) Marine Design, Construction and Trades presented by regional shipbuilders and boat builders (Electric Boat, Community Colleges, and Training Centers); Lighthouse and Aids to Navigation technology, history and preservation presented by lighthouse and maritime historians and the USCG Research and Development Center.
- 3) Arctic Strategies and Policy presented by the USCG Academy Center for Arctic Strategies & Policy, the International Ice Patrol, and the USCG Research and Development Center.
- 4) Homeland & Cyber Security Education presented by the USCG Academy DHS/NSA Center of Academic Excellence in Cyber Defense Education and the Northeastern University DHS Center of Excellence.
- 5) Maritime Law and Public Policy presented by the USCG Academy. Topics may include maritime enforcement operations related to national issues of border protection, drug interdiction, maritime trade and commerce.
- 6) Maritime Research and Innovation presented by the USCG Research and Development Center. Topics related to USCG R&D Center past and present research projects.
- 7) Marine Science and Technology presented by the USCG Academy, the USCG Research and Development Center, and the International Ice Patrol. Topics may include maritime protection, including living marine resources, maritime pollution response, regional healthcare and biotechnology.
- 8) Coast Guard History and Leadership presented by the USCG Auxiliary, the Admiral James M. Loy Institute for Leadership, and the USCG Leadership Development Center. Topics may include moments in history, military leaders, military heroes, crisis leadership, and leadership character in action.

ADULT CONFERENCES & SYMPOSIUMS

The third and final component of the Adult Education offering will be to host Adult Conferences and Symposiums. The goal for the National Coast Guard Museum is to serve as a world-class facility to draw professional organizations and their members to the museum and our maritime region.

Adult Professional Organizations with strong ties to the Coast Guard

- 1) Research and Innovation Symposiums sponsored by the USCG Research and Development Center and attended by government, academia, industry, and research professionals.

- 2) Leadership Symposiums sponsored by the Admiral James M. Loy Institute for Leadership and attended by government, academia, industry, athletic, and non-profit professionals.
- 3) Professional Engineering Society Conferences sponsored by the USCG Academy and attended by professional organization and society members.
- 4) Annual Cadet Engineering Advisory Event sponsored by the USCG Academy and attended by USCG Academy professors and Coast Guard engineering and acquisition program managers.

ADULT EDUCATION SPACE REQUIREMENTS

Planners for the National Coast Guard Museum envision state-of-the-art spaces that will gain national attention for innovative learning. Since these spaces are envisioned to be used for adult learning on a limited basis (evenings and weekends), designers should plan for multi-use spaces incorporating design features that allow use for daytime students and public visitors. See the MEI Preliminary Concept Report (Phase I).

Major Features

- 1) Interactive Learning Center to support the Adult Leadership and Professional Development Programs
- 2) Theater/Stage with Lighting to support the Adult Speaker Series
- 3) Large format Video Screen with Audio, Webcast, and Internet Access/Feeds
- 4) Adjacent Gathering/Reception Area and Food/Beverage Service Area
- 5) Larger Event Space to host Conferences, Symposiums, and Ceremonial Events with Seated Dining
- 6) Adjacent Waterfront Marina to afford Ship/Boat Tours
- 7) Convenient Parking

ACKNOWLEDGEMENTS

(PII) (b)(6)

Museum Education Initiation (MEI) Sponsors:

(PII) (b)(6)

Executive Director, National Coast Guard Museum Association
Deputy Historian, United States Coast Guard

Museum and Early Education Partners:

(PII) (b)(6)

Pre-K Teacher, Catherine Kolnaski STEAM Magnet School
Director of the Sea School Preschool, Mystic Aquarium
Director for Kindergarten Readiness Programs, Clinton Public Schools
Director of Education, Mystic Seaport
Assistant Director, Imagine Nation Museum
Director of Development, LEARN Regional Education Service Center
Director of New London Programs, NESS
Director of Stonington Programs, NESS
Associate Director for School and Family Programs, Mystic Seaport
Director of Young Children and Families, LEARN
Director of Early Childhood Programs, Connecticut College
Director of Development & Marketing, Imagine Nation Museum

Industry, Museum and Adult Education Partners:

(PII) (b)(6)

Chairman, Mohegan Tribe
Director of Development, LEARN Regional Education Service Center
Section Chief of Naval Architecture and Marine Engineering, USCGA
Director of Research Partnerships, USCG R&D Center
Chief Executive Officer, Harkcon, Inc. and the Harkcon Academy
Director, Admiral James M. Loy Institute for Leadership, USCGA
President, USCGA Alumni Association
Chief Engineer for Commercial Programs, Sikorsky Aircraft
Senior Manager of Human Resources, Electric Boat
President, Mystic Seaport

SOURCE DOCUMENTS

MEI Preliminary Concept Report (Phase I), March 2018
MEI Early Education Forum Minutes, May 2018
MEI Adult Education Forum Minutes, May 2018
MEI Adult Education USCG Partner Interviews, May 2018

ADDITIONAL EDUCATION RESOURCES

Stanford Graduate School of Business - Best Practice
<https://www.gsb.stanford.edu/stanford-gsb-experience/learning/leadership/leadership-labs>

Admiral Loy Institute for Leadership
https://www.cgaalumni.org/s/1043/uscga/index_allpresent.aspx?sid=1043&gid=1&pgid=3625

Center for Creative Leadership
<https://www.ccl.org/>

Escape Rooms
<https://worldofescapes.com/nyc/quests/bane-escape-rooms-maritime-grave>

Coast Guard Pub 1
https://www.overview.uscg.mil/Portals/6/Documents/PDF/CGPub_1-0_Doctrine.pdf?ver=2016-10-20-094949-363

War Gaming
<http://www.johntillersoftware.com/>

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EXHIBIT E

14 U.S.C. § 316 as amended by §8439(a) of the
Elijah E. Cumming Coast Guard Authorization Act of 2020 (Pub. L. No. 116-283)

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1 **SEC. 8439. AUTHORITY TO ENTER INTO AGREEMENTS WITH**
2 **NATIONAL COAST GUARD MUSEUM ASSOCIA-**
3 **TION.**

4 (a) IN GENERAL.—Section 316 of title 14, United
5 States Code, is amended to read as follows:

6 **“§ 316. National Coast Guard Museum**

7 “(a) ESTABLISHMENT.—The Commandant may es-
8 tablish, accept, operate, maintain and support the Mu-
9 seum, on lands which will be federally owned and adminis-
10 tered by the Coast Guard, and are located in New London,
11 Connecticut.

12 “(b) USE OF FUNDS.—

13 “(1) The Secretary shall not expend any funds
14 appropriated to the Coast Guard on the construction
15 of any museum established under this section.

16 “(2) Subject to the availability of appropria-
17 tions, the Secretary may expend funds appropriated
18 to the Coast Guard on the engineering and design
19 of a Museum.

20 “(3) The priority for the use of funds appro-
21 priated to the Coast Guard shall be to preserve, pro-
22 tect, and display historic Coast Guard artifacts, in-
23 cluding the design, fabrication, and installation of
24 exhibits or displays in which such artifacts are in-
25 cluded.

1 “(c) FUNDING PLAN.—Not later than 2 years after
2 the date of the enactment of the Elijah E. Cummings
3 Coast Guard Authorization Act of 2020 and at least 90
4 days before the date on which the Commandant accepts
5 the Museum under subsection (f), the Commandant shall
6 submit to the Committee on Commerce, Science, and
7 Transportation of the Senate and the Committee on
8 Transportation and Infrastructure of the House of Rep-
9 resentatives a plan for constructing, operating, and main-
10 taining such Museum, including—

11 “(1) estimated planning, engineering, design,
12 construction, operation, and maintenance costs;

13 “(2) the extent to which appropriated, non-
14 appropriated, and non-Federal funds will be used for
15 such purposes, including the extent to which there is
16 any shortfall in funding for engineering, design, or
17 construction;

18 “(3) an explanation of any environmental reme-
19 diation issues related to the land associated with the
20 Museum; and

21 “(4) a certification by the Inspector General of
22 the department in which the Coast Guard is oper-
23 ating that the estimates provided pursuant to para-
24 graphs (1) and (2) are reasonable and realistic.

25 “(d) CONSTRUCTION.—

1 “(1) The Association may construct the Mu-
2 seum described in subsection (a).

3 “(2) The Museum shall be designed and con-
4 structed in compliance with the International Build-
5 ing Code 2018, and construction performed on Fed-
6 eral land under this section shall be exempt from
7 State and local requirements for building or demoli-
8 tion permits.

9 “(e) AGREEMENTS.—Under such terms and condi-
10 tions as the Commandant considers appropriate, notwith-
11 standing section 504, and until the Commandant accepts
12 the Museum under subsection (f), the Commandant
13 may—

14 “(1) license Federal land to the Association for
15 the purpose of constructing the Museum described in
16 subsection (a); and

17 “(2)(A) at a nominal charge, lease the Museum
18 from the Association for activities and operations re-
19 lated to the Museum; and

20 “(B) authorize the Association to generate
21 revenue from the use of the Museum.

22 “(f) ACCEPTANCE.—Not earlier than 90 days after
23 the Commandant submits the plan under subsection (c),
24 the Commandant shall accept the Museum from the Asso-

1 ciation and all right, title, and interest in and to the Mu-
2 seum shall vest in the United States when—

3 “(1) the Association demonstrates, in a manner
4 acceptable to the Commandant, that the Museum
5 meets the design and construction requirements of
6 subsection (d); and

7 “(2) all financial obligations of the Association
8 incident to the National Coast Guard Museum have
9 been satisfied.

10 “(g) SERVICES.—The Commandant may solicit from
11 the Association and accept services from nonprofit enti-
12 ties, including services related to activities for construction
13 of the Museum.

14 “(h) AUTHORITY.—The Commandant may not estab-
15 lish a Museum except as set forth in this section.

16 “(i) DEFINITIONS.—In this section:

17 “(1) MUSEUM.—The term ‘Museum’ means the
18 National Coast Guard Museum.

19 “(2) ASSOCIATION.—The term ‘Association’
20 means the National Coast Guard Museum Associa-
21 tion.”.

22 (b) BRIEFINGS.—Not later than March 1 of the fiscal
23 year after the fiscal year in which the report required
24 under subsection (d) of section 316 of title 14, United
25 States Code, is provided, and not later than March 1 of

1 each year thereafter until 1 year after the year in which
2 the National Coast Guard Museum is accepted pursuant
3 to subsection (f) of such section, the Commandant shall
4 brief the Committee on Commerce, Science, and Transpor-
5 tation of the Senate and the Committee on Transportation
6 and Infrastructure of the House of Representatives on the
7 following issues with respect to the Museum:

- 8 (1) The acceptance of gifts.
- 9 (2) Engineering.
- 10 (3) Design and project status.
- 11 (4) Land ownership.
- 12 (5) Environmental remediation.
- 13 (6) Operation and support issues.
- 14 (7) Plans.

15 **SEC. 8440. VIDEO EQUIPMENT; ACCESS AND RETENTION OF**
16 **RECORDS.**

17 (a) MAINTENANCE AND PLACEMENT OF VIDEO SUR-
18 VEILLANCE EQUIPMENT.—Section 3507(b)(1) of title 46,
19 United States Code, is amended—

20 (1) by striking “The owner” and inserting the
21 following:

22 “(A) IN GENERAL.—The owner”;

23 (2) by striking “, as determined by the Sec-
24 retary”; and

25 (3) by adding at the end, the following:

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EXHIBIT F

2020 Discovery Report

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DISCOVERY REPORT

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ABOUT THIS REPORT

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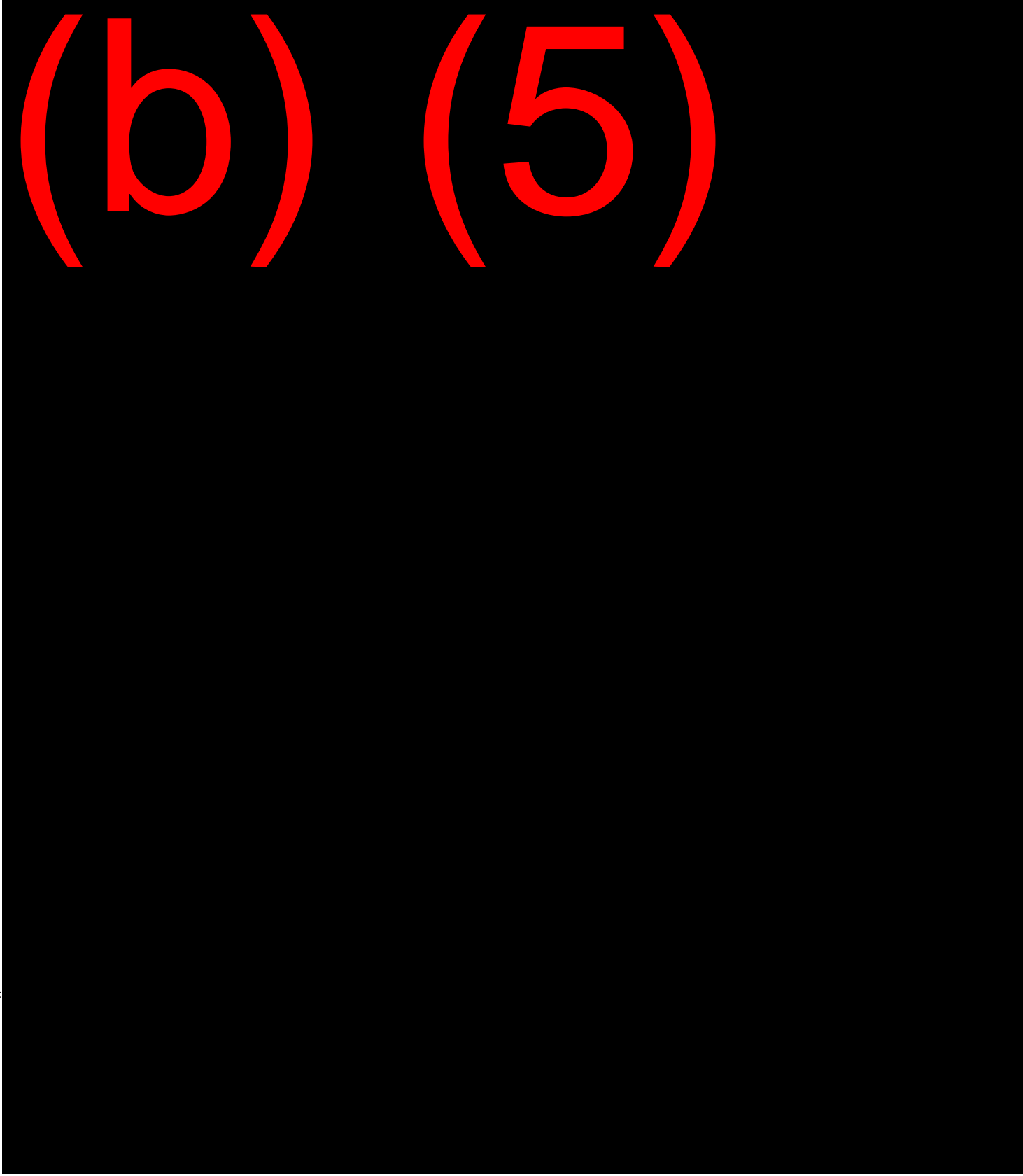
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