



**U.S. Department
of Transportation
Maritime Administration**



USMMA: Red Sky in the Morning

**A Report by the U.S. Merchant Marine Academy
Capital Improvements Advisory Panel**

March 2010





“The Academy serves the Merchant Marine as West Point serves the Army and Annapolis serves the Navy.”

-President Franklin D. Roosevelt

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“Red sky in the morning, sailor take warning.”

-Maritime Folklore

“They have delivered the goods when and where needed in every theater of operations and across every ocean in the biggest, the most difficult and dangerous transportation job ever undertaken.”

- President Franklin D. Roosevelt

I. Executive Summary

The United States Merchant Marine Academy (the Academy) is one of five federal service academies. Authorized by Congress in 1936, the Academy serves a unique dual role, educating professional mariners to serve both the defense and the economic needs of the nation. The Academy first achieved national recognition during World War II, and the defense contributions of its graduates continued through Korea, Vietnam, and the Persian Gulf Wars, to Iraq and Afghanistan today. Roughly 70% of new Academy graduates serve in the merchant marine, 20% in the military, and 10% in other approved strategic maritime roles. In 2009, the number of Academy graduates that accepted a commission in the U. S. Armed Forces rose to more than 30%. Alumni serve in leadership positions across every segment of the U.S. maritime industry, in all the military services, and in numerous government agencies. Courses of study at the Academy focus on nautical science, marine engineering, intermodal logistics, and shipyard management. All graduates must complete the requirements for a Coast Guard license in the merchant marine, and qualify to serve in a reserve component of the U.S. Armed Forces or in the National Oceanic and Atmospheric Administration. The Academy is fully accredited by the Middle States Commission on Higher Education, and is one of the world’s foremost institutions of maritime education.

The Academy campus is located on 82 acres along the north shore of Long Island, New York. Principal facilities include 44 buildings supporting classrooms, maritime simulators, engineering laboratories, and midshipmen messing, berthing, and athletic facilities. Most Academy buildings were constructed during or shortly after World War II. In recent years, the need for major investment in the Academy’s infrastructure has become increasingly apparent. Several structures, including the Academy’s piers, have become unserviceable, while others have required urgent repairs to prevent further significant deterioration or safety hazards. Current capital, maintenance, and modernization needs far outpace available funding. Moreover, the condition and functionality of the campus does not remotely compare, even adjusting for size, to other service academies, despite the acknowledged excellence of the Academy’s engineering programs, faculty, and students.

Confronted with this situation and with a clear desire to restore the Academy as a “national jewel” more on a par with other service academies, Secretary of Transportation Ray LaHood directed the Maritime Administration to convene an independent “Blue Ribbon” advisory panel of senior government executives to “put a fresh set of eyes” on the Academy’s Capital Improvement Plan and its investment priorities. The Secretary directed the Panel to review the suitability of the Academy’s facilities, and provide advice on the priority and efficacy of projects that should be undertaken.

The Advisory Panel concluded that the condition of the Academy’s physical plant has reached a tipping point. Many facilities, including several that house and feed midshipmen, are in such poor condition that they are no longer capable of meeting the needs of the regiment. Others have reached the end of their useful life and are in urgent need of extensive refurbishment or replacement (see Figure 1). Current maintenance and capital funding is not sufficient to reverse this decline. Failure to improve the maintenance of the Academy’s facilities and to aggressively invest in more suitable and modern facilities, including engineering laboratories and marine simulators, will result in the decline of the institution and risks the eventual loss of the school’s accreditation. On the other hand, a sound planning, maintenance, and capital investment program will improve the Academy and lower facility life-cycle and operating costs.

The U.S. Merchant Marine Academy needs to be recapitalized. For a recapitalization effort to be successful, the Academy needs: (1) A clear and comprehensive strategic plan to properly guide capital investment; (2) Additional sustained base funding to better support facilities maintenance and life-cycle replacement of equipment; (3) Additional qualified staff to manage the maintenance of the Academy’s buildings and infrastructure; (4) A small engineering and planning staff to oversee new construction and renovation projects; (5) Additional recapitalization funding sustained over time; and (6) To expand the use of new and more cost effective educational technologies.

With these in place, the Academy will be in a stronger position to attract a talented and diverse student body, sustain academic excellence, reverse years of neglect, and better serve the nation’s economic and national security interests.

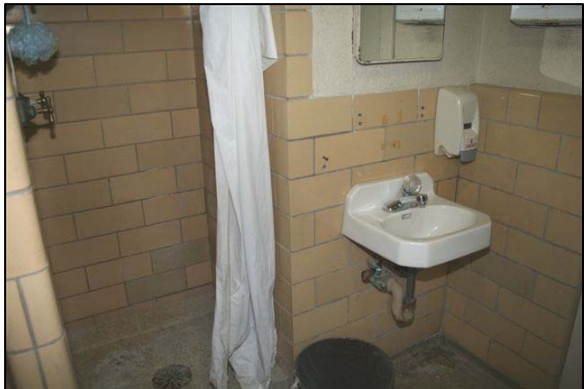
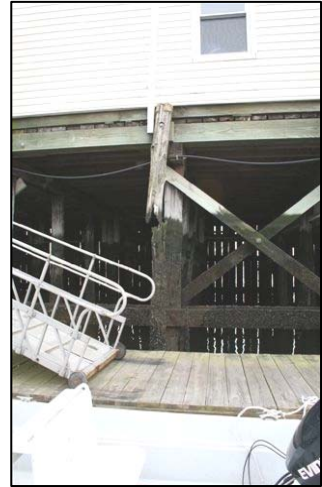


Figure 1. Photographs of USMMA facilities in need of repair/refurbishment (left to right, top to bottom): Outdated restrooms; Leaking boiler; East end of Crowninshield Pier; Southernmost end of Mallory Pier; Obsolete lab equipment; Midshipmen Locker room; Dormitory shower facilities.

II. The United States Merchant Marine Academy

Congress has determined that it is necessary for the national defense and the proper growth of foreign and domestic commerce that the United States have a Merchant Marine of the best equipped and most suitable types of vessels sufficient to carry the greater portion of its commerce and serve as a naval or military auxiliary in time of war or national emergency. (46 U.S.C. §1101(a))

Importance to the U.S. Economy

A map of the United States reminds us that we are a maritime nation. To the east is the Atlantic Ocean; to the west, the Pacific; off our southern border, the Gulf of Mexico; in the north, the Bering Sea, the Arctic Ocean and the Great Lakes; and crisscrossing our states, great rivers like the Mississippi and other inland waterways.

Every hour of every day, ships of all types ply the waters in and around our nation. They leave our ports laden with U.S. goods bound for foreign markets, and arrive in our harbors with merchandise and materials for American consumers and manufacturers.

Tankers travel along the west and gulf coasts with crude oil for our refineries and chemicals for our industries; in the Great Lakes vessels load iron ore, coal, and minerals for American industry; huge containerships enter and leave California, Washington, and our eastern ports, their box-like containers filled with manufactured goods; in the Gulf cargo ships unload pallets of coffee and crates of fruit, and along our rivers towboats push and pull barges carrying grain and coal.

Over 420 vessels of over 1000 gross registered tons, owned by U.S. companies, registered and operated under the American flag, comprise the U.S. Merchant Marine. This fleet of highly productive and increasingly complex ships is a major part of our system of commerce, helping guarantee our efficient access to foreign markets.

National economic needs met by the U.S. Merchant Marine are staggering. In 2008, 38,000 transits by U.S. flag vessels transported 2.3 billion metric tons of cargo bound for foreign and domestic markets. Although the U.S. accounts for only 4.5% of the world's population, it accounts for 17% of global waterborne trade. Ninety-nine percent of these shipments were transported by U.S. and foreign merchant vessels. In 2008, the U.S. accounted for 18% of global container trade, 22% of global petroleum trade, 18% of global coal trade, and 38% of global grain trade.

Nor do ships at sea operate in a vacuum. They depend on a complex framework of shore activities for their continued operation. This includes businesses that own and manage the vessels; the ports and terminals where cargo is handled; shipyards that build and repair vessels; marine insurance underwriters; ship-chartering firms; admiralty firms; engineering and research companies; and the trucking companies and railroads that distribute goods around the country.

However, the most important element in a productive merchant fleet and a strong transportation industry is people—men and women who are intelligent, dedicated, well-educated, and competent. The purpose of the U.S. Merchant Marine Academy (USMMA) is to ensure that such trained leaders are available to serve the nation's merchant marine.

Merchant Marine Academy graduates are skilled in intermodal logistics, maritime operations, and marine engineering. Merchant marine officers are a unique resource for our nation, which from its inception has been a trading and seafaring power. As ships increase in size and engineering complexity—LNG tankers for example—the talents of Kings Point graduates are increasingly vital to America's national security and economic interests, which include energy independence and transformation, environmental security, economic growth, and the safe and secure transportation of dangerous cargo throughout our nation's transportation network.

National Defense

The merchant marine and American merchant mariners have always been vital contributors to national defense. They have participated in every war from the American Revolution to today's conflicts in Afghanistan and Iraq. It is no exaggeration to say that without the U.S. Merchant Marine, America's military could not fight and win our nation's wars. Today over 7200 merchant mariners serve with distinction crewing naval auxiliary vessels that deliver over 92% of the equipment and supplies needed by American military forces in Iraq and Afghanistan. They are the unsung heroes of national defense.

The U.S. Merchant Marine played a historic role in World War II. The convoys of merchant ships delivering troops, weapons, food, ammunition, and fuel to the armies around the globe were essential to Allied victory. Civilian merchant mariners crewed thousands of Liberty ships, Victory ships, and other vessels that sailed under the U.S. flag. They traveled all the oceans of the world and faced constant danger from weather, submarines, surface combatants, and enemy aircraft. More than 700 American merchant ships and 6,200 U.S. merchant mariners, including 142 midshipmen from the United States Merchant Marine Academy, were lost to enemy action. Another 11,000 mariners were wounded, and more than 600 became prisoners of war.

Although the number of ships may have diminished over the years, their importance in any global conflict is undiminished. American merchant mariners have remained indispensable to America's national security over the past 60 years. Since 1949, the Military Sealift Command (MSC), the naval component of the United States Transportation Command, has relied heavily on U.S. merchant mariners to transport critically needed cargo. They served with distinction in the Korean War and Vietnam War. Without U.S. ships and U.S. merchant mariners, the MSC could never have deployed the equipment and supplies needed to support 500,000 American troops in the first Gulf War.

Today, MSC is the largest employer of U.S. merchant mariners in the world. More than 7,200 work either as federal civil service mariners in the Naval Fleet Auxiliary Force, or as commercial mariners employed by companies under contract to the Military Sealift Command. U.S. merchant mariners crew fast sealift ships, roll-on/roll-off vessels, tankers and dry cargo ships that routinely move military supplies and equipment to combat theaters. Others are prepositioned near potential hot spots throughout the world.

And U.S. Merchant Marine Academy graduates continue to provide valuable support to the Armed Forces. In 2009, graduates of Kings Point entered every military service, a record not matched by any other federal service academy.

National and Global Emergencies

The men and women of the merchant marine also play a vital role in responding to natural disasters. U.S. ships crewed by U.S. merchant mariners routinely transport humanitarian relief supplies to countries throughout the world, including the most recent efforts to assist Haiti. U.S. mariners and ships also provide humanitarian assistance at home. For example, when hurricanes Katrina and Rita destroyed parts of the United States Gulf Coast in 2005, the Federal Emergency Management Agency enlisted eight ships from the Ready Reserve Force, crewed by civilian merchant mariners to shelter survivors, protect and store emergency response equipment, and generate electrical power.

International Piracy

The work of the men and women of the merchant marine frequently places them in harm's way to meet the needs of the nation. Even in peacetime, U.S. merchant mariners must transit high-risk areas. In April 2009, the *Maersk Alabama* was seized by Somali pirates off the coast of Africa while transporting 14,120 metric tons of relief supplies to Mombasa, Kenya. American mariners used their counter-piracy training to regain control of the vessel. Incidents such as the attack on the *Maersk Alabama* demonstrate not only the dedication of civilian merchant mariners, but also the high quality of the training they have received. Training USMMA midshipmen receive before entering merchant marine service equips them to deal with life-threatening situations—including pirate attacks. USMMA anti-piracy training includes identifying high-risk areas, evasive maneuvering, and repelling boarders.

III. The Blue Ribbon Advisory Panel

The United States Secretary of Transportation is charged with the oversight and administration of the United States Merchant Marine Academy. The Academy is located on 82 acres along the north shore of Long Island, New York. Principal facilities include waterfront piers and 44 buildings supporting classrooms, simulators, engineering labs, and midshipmen messing, berthing, and athletic facilities. Many principal buildings were built during or shortly after World War II. In recent years, the need for major infrastructure renovation has become increasingly apparent. Several facilities, including the piers, became unserviceable, while others required urgent repair to prevent major structural deterioration or correct safety problems. Current capital improvement and maintenance needs far outpace available funding. Moreover, in condition and functionality the campus does not remotely compare, even adjusting for size, to the other service academy facilities, despite the acknowledged excellence of the Academy's engineering programs, faculty and students.

Confronted with this situation and with a clear desire to restore the Merchant Marine Academy as a "national jewel" more on a par with other service academies, Secretary of Transportation Ray LaHood directed the Maritime Administration to convene an independent "Blue Ribbon" advisory panel of senior executives to "put a fresh set of eyes" on the Academy's Capital Improvement Plan and its investment priorities. The Secretary directed the panel to review the adequacy and suitability of the Academy facilities, and provide advice on the priority and efficacy of projects that should be undertaken.

On May 18, 2009, the following five senior executives were invited to become voting members of the United States Merchant Marine Academy Capital Improvements Advisory Panel:

- Vice Admiral Thomas Barrett, USCG (Ret.), Deputy Federal Coordinator, Alaska Natural Gas Transportation Projects (*Panel Chair*)
- General Duncan J. McNabb, USAF, Commander, U.S. Transportation Command. General McNabb was assisted by Major General William Johnson, USA, Chief of Staff, U.S. Transportation Command.
- Mr. Donald Orndoff, former Director, Office of Facilities Construction and Management, Department of Veterans Affairs
- Ms. Connie Patrick, Director, Federal Law Enforcement Training Center
- Rear Admiral J. Scott Burhoe, USCG, Superintendent, United States Coast Guard Academy

Members of the Panel were selected for their knowledge of the maritime industry, management and administration of academic institutions, and current engineering and construction practices. A biography of each of the members is provided in Appendix A.

The Panel's voting members were assisted by six ex-officio members from the Maritime Administration:

- Mr. David Matsuda, Acting Maritime Administrator
- Mr. James Caponiti, Assistant Administrator
- Rear Admiral Allen Worley, former Superintendent of the USMMA
- Mr. Taylor Jones, former Associate Administrator for Administration
- Mr. David Rivait, Chief Financial Officer
- Mr. William Kaag, Office of Ship Operations

As provided for in the Panel's charter, the purpose of the Panel was to review the adequacy and suitability of the USMMA's Capital Improvement Plan and provide advice on the priority and efficacy of projects to be included in the Academy's capital improvement budget for FY 2010-2015 (Phase I), and FY 2016-2020 (Phase II). The full charter of the Panel is provided as Appendix B.

Since its appointment in May 2009, the U.S. Merchant Marine Academy Capital Improvements Advisory Panel has met four times: twice by teleconference, once at the U.S. Merchant Marine Academy and once in Washington, DC. The panel met at length with former Superintendent Allen Worley, Assistant Superintendent for Academic Affairs, Dr. Shashi Kumar, and other senior administrators at Kings Point. The panel toured the campus, inspected the physical condition of all the major facilities addressed in the 2008 Capital Improvement Plan, and spoke with faculty and students. In preparing recommendations, the panel took into account the Academy's core missions; midshipmen safety and welfare; midshipmen licensing requirements; overall academic excellence, particularly in maritime engineering; life-cycle asset cost; and energy efficiency. The Maritime Administration also engaged a commercial engineering firm, BANC3, to analyze and revise the cost estimates for projects contained in the current capital plan. During the meeting in Washington, DC, the Panel received a briefing from BANC3 on the estimated cost of the projects contained in the Capital Investment Plan; the firm's written report is provided as Appendix C.

The former Academy Superintendent, RADM Allen Worley, and the Assistant Superintendent for Academic Affairs and Academic Dean, Dr. Shashi Kumar, gave the Panel a vision document entitled "Voyage to Excellence." This document described how the USMMA intends to become the global leader in maritime education, training, and simulation; and the foremost authority in maritime security and anti-piracy education. The full document is provided as Appendix D.

IV. Panel Findings

Facility Condition

The Panel members found many USMMA facilities seriously deteriorated. Academic and support buildings were inadequately maintained, basic structural elements of some buildings were failing, electrical and plumbing support had deteriorated, and engineering laboratories were outdated. The pier facilities, dining hall, athletics complex, and two of the dormitories, were in particularly poor condition. If the current conditions are not alleviated and further facility deterioration occurs, the Merchant Marine Academy will not continue to attract and educate a diverse and talented cadre of future maritime leaders. For example, despite having been an early leader, the USMMA now lags behind other service academies in recruiting women. Based on our observations we believe the poor condition of Academy's facilities has contributed to this problem. The dilapidated condition of several of the barracks and the athletic facilities are inadequate for women's residence and sports programs and hamper recruiting. The Panel believes that a well-maintained campus and state of the art vessel simulation equipment are necessary to attract and maintain a talented corps of midshipmen. Competition among educational institutions for the best students is fierce. Colleges and universities continue to invest heavily in campus facilities that will attract the best and brightest high school graduates, and build a broad and diverse student body. Parents are intensely involved in the college selection process, and pay close attention to the condition of the academic resources, medical clinics, athletic facilities and dormitories at schools their children consider attending.

The Academy's athletic facilities are considerably below the standards needed to support its mission, which like all service academies, requires an emphasis on physical fitness, competition, and the leadership skills that athletic activities help to develop. The gymnasium, which was originally constructed in 1943, needs to be upgraded to modern ventilation, lighting, and floor standards and eventually replaced. Athletic facilities such as pools, gyms tracks and fields, are not normally given the same level of importance as are academic facilities such as laboratories or classrooms. However, it is the Panel's opinion that the USMMA's rigorous physical education program is an important component of each midshipman's development, and the athletic facilities including the gym, pool, indoor track and athletic fields no longer meet the personal and professional needs of developing midshipmen.

As mentioned before, the piers are in an abysmal state, and have remained safe only through the hard work and dedication of the maintenance staff. The Panel was pleased to hear that the Maritime Administration has set aside \$15.5 million in Fiscal Year 2010 to make extensive repairs to these structures. The Academy would also like to enlarge Mallory Pier. Although the enlargement of the pier may be a worthwhile goal, in the short term we feel that the Department should accord priority funding to other projects that have an immediate impact on academic excellence and student health and welfare.

Academy Accreditation

USMMA, above all else, is a college. As such, it is subject to regional accreditation standards in the same way all colleges and universities are accredited. The Middle States Commission on Higher Education accredits the USMMA. Their next formal site visit will be in 2016, six years from now.

The Commission lists the following as an educational “Characteristic of Excellence”:

The human, financial, technical, facilities, and other resources necessary to achieve an institution’s mission and goals are available and accessible. In the context of the institution’s mission, the effective and efficient uses of the institution’s resources are analyzed as part of ongoing outcomes assessment.¹

This standard is further amplified in the Commission’s Standards for Accreditation (*Panel’s bold*):

The efficient and effective use of institutional resources requires sound financial planning linked to institutional goals and strategies. These goals and strategies that support the institution’s mission and require continual assessment of financial performance against the financial plan. **The institution should demonstrate** through an analysis of financial data and its financial plan **that it has sufficient financial resources and a financial plan to carry out its mission and execute its plans**, and if necessary, a realistic plan to implement corrective action to strengthen the institution financially within an acceptable time period.

An accredited institution is expected to possess or demonstrate the following attributes or activities:

---strategies to measure and assess the level of, and efficient utilization of, institutional resources required to support the institution’s mission and goals;

---rational and consistent policies and procedures in place to determine allocation of assets;

---an allocation approach that ensures adequate faculty, staff, and administration to support the institution’s mission and outcomes expectations;

---**a financial planning and budgeting process aligned with the institution’s mission, goals, and plan** that provides for an annual budget and multi-year budget projections, both institution-wide and among departments; utilizes planning and assessment documents; and addresses resource acquisition and allocation for the institution and any subsidiary, affiliated, or contracted educational organizations as well as for institutional systems as appropriate;

¹ Middle States Commission on Higher Education (2009), *Standard #3: Institutional Resources, Characteristics of Excellence in Higher Education*.

---a comprehensive infrastructure or facilities master plan and facilities/infrastructure life-cycle management plan, as appropriate to mission, and evidence of implementation;

---recognition in the comprehensive plan that facilities, such as learning resources fundamental to all educational and research programs and the library, are adequately supported and staffed to accomplish the institution's objectives for student learning, both on campuses and at a distance;

---an educational and other equipment acquisition and replacement process and plan, including provision for current and future technology, as appropriate to the educational programs and support services, and evidence of implementation;²

The Panel believes that the Academy's accreditation may be at risk if immediate steps are not taken to improve the maintenance, repair, and replacement of its existing facilities.

Strategic Planning

The faculty and staff the Panel met were dedicated, energetic, and talented. They are doing a remarkable job despite being hampered by a lack of modernized classrooms, simulators, lab equipment, and library resources. However, the lack of a comprehensive and realistic Strategic Plan has caused the faculty to "look after themselves" and work toward improving facilities closest to their area of responsibility. A broader and more comprehensive recapitalization strategy will provide faculty and staff with a better understanding of the Academy's investment priorities. In an environment of scarcity and detrimental budgets, staff and faculty easily lose a sense of hope and optimism, which is so important to the students they teach and lead. Given the right tools (facilities and laboratories), the staff and faculty are capable of taking Academy performance to new heights.

² Middle States Commission on Higher Education (2009), *Standard #3: Institutional Resources, Characteristics of Excellence in Higher Education*.

V. Strategy for Effective Facilities Management

Sustained Programmatic Investment

Over time, facilities typically become more expensive to operate and less capable of supporting the institution's current mission (see Figure 2). The best way to combat these performance trends is through proactive, programmatic investment. This includes dedicated resources to both sustain facilities during day-to-day operations, and to replace structures at the end of their useful life.

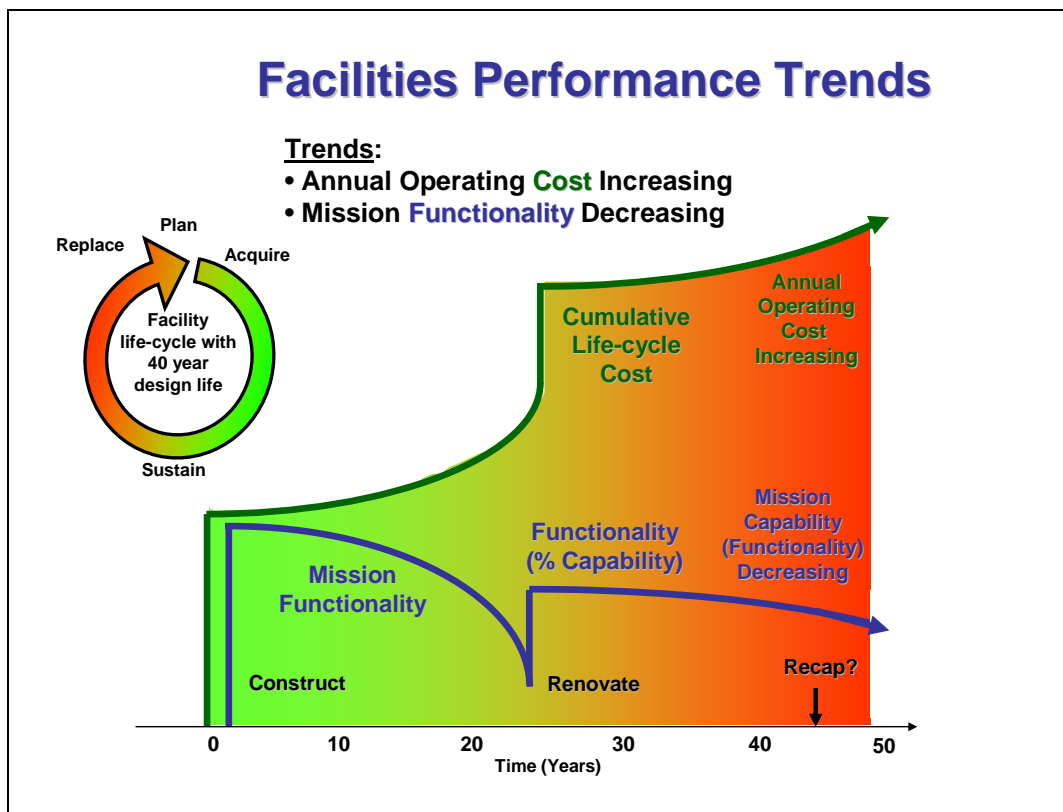


Figure 2

There are three general types of programmatic investments:

- Sustainment funding is used to maintain operational building systems at full capability. Sustainment is typically categorized as an annual operating expense.

- Restoration funding is used to return degraded building systems (through repair or replacement) back to an operational condition. Restoration can be either an operating expense or a recapitalization project, depending on the scope of the project.
- Modernization funding is used to replace or rebuild existing dysfunctional infrastructure to create new mission capability. Modernization is typically executed through a recapitalization project.

Sustainment, restoration, and modernization (SRM) funding typically comprises two-thirds of an institution's overall facilities budget. The remaining third consists of operating costs for energy consumption, new footprint construction, lease payments, and facilities management labor. All typical categories of facility expenses, in their relative proportion, are shown below in Figure 3.

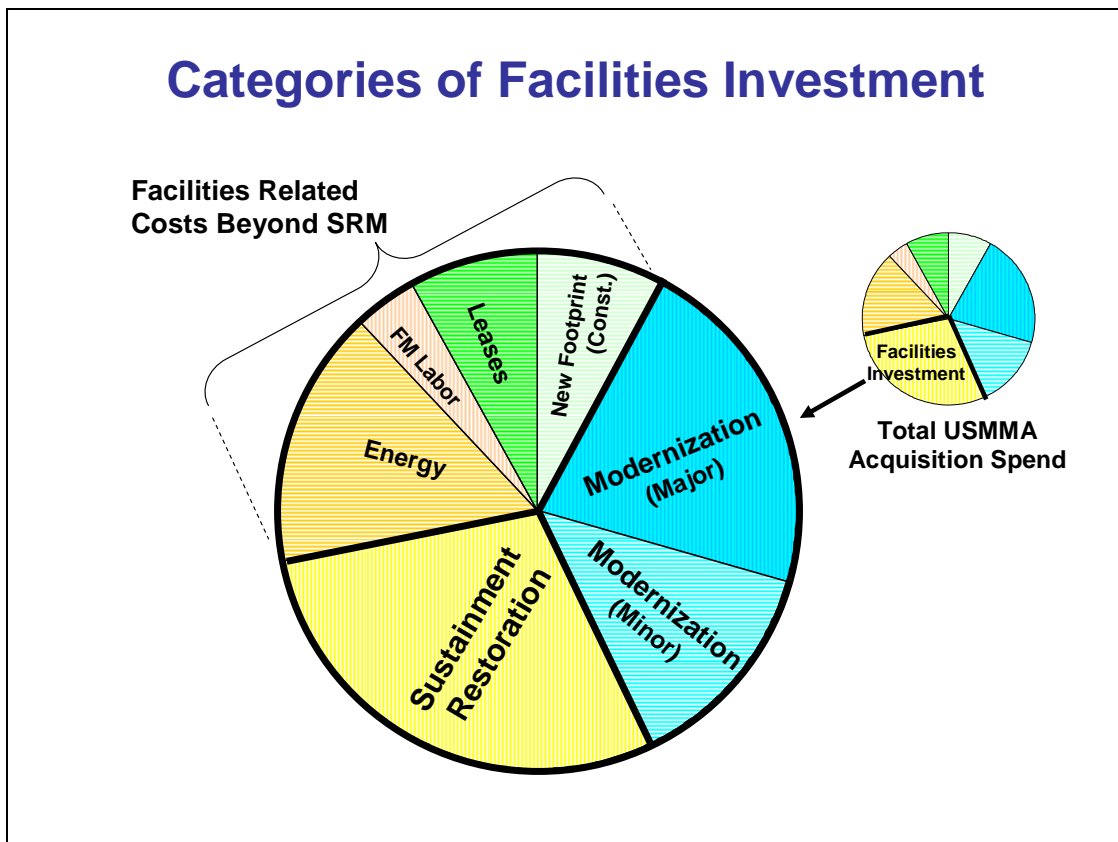


Figure 3

Impact of Under Investing

One of the principal challenges to a program of sustained facility investment is the temptation to defer expenses. With many urgent priorities, facility investments are often postponed until a future budget year. These investments then become the target of compressed discretionary funding because the impact of the deferral is not immediately apparent. However, deferring programmatic investment ultimately drives up operating costs, reduces functionality, and generates other significant undesirable consequences that include:

- Decreased functionality
- Unanticipated and repeated isolated mission failures
- Increased operating cost to perform “break down” repairs
- Increased occupant dissatisfaction with the quality of facilities provided
- Diminished public image of the organization
- Increased external stakeholder pressure to apply urgent, unprogrammed “fixes”

Required Level of Investment

The widely accepted standard for investing in federal and industrial facility infrastructure is the combination of sustainment, restoration, and modernization funding at the level of 4% to 8% of Plant Replacement Value (PRV). From a programmatic perspective, the USMMA should invest a minimum of 2.5% of PRV for sustainment and restoration, and another 2.5% of PRV for modernization for a combined annual level of investment of 5% of PRV. This level of investment will allow the Academy to maintain the condition of the campus over time. These percentages are based on numerous studies conducted by both the National Research Council³ and the National Institute of Building Sciences.

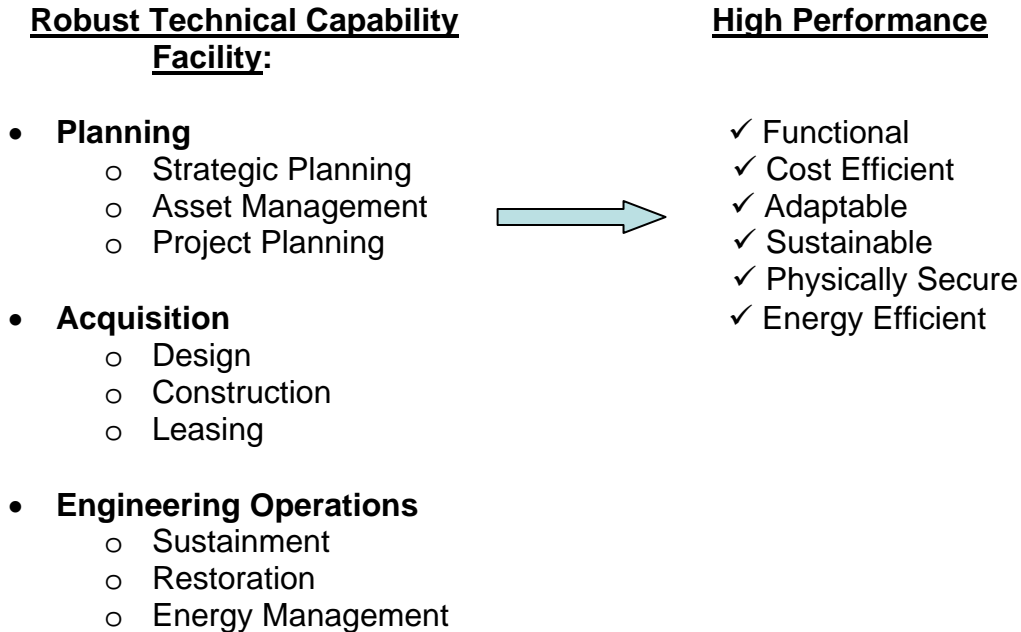
Programmatic Investment Targets

- Sustainment and Restoration
 - Industry Range: 2%- 4% of Plant Replacement Value (PRV)
 - Recommended USMMA Minimum Target: 2.5% of PRV
- Modernization
 - Industry Range: 2%- 4% of PRV
 - Recommended USMMA Minimum Target: 2.5% of PRV
- **Recommended Combined USMMA Target: 5% of PRV**

³ National Research Council (2004), *Investments in Federal Facilities: An Asset Management Strategy for the 21st Century*. Washington, DC: National Academy Press.

Capability Drives Performance

Beyond adequate funding, the USMMA needs a dedicated facilities management staff consistent with the size and age of the institution. This team should include specialists in planning, acquisition, and engineering operations. Institutional capability of this type is essential to maintain high quality academic and training facilities.



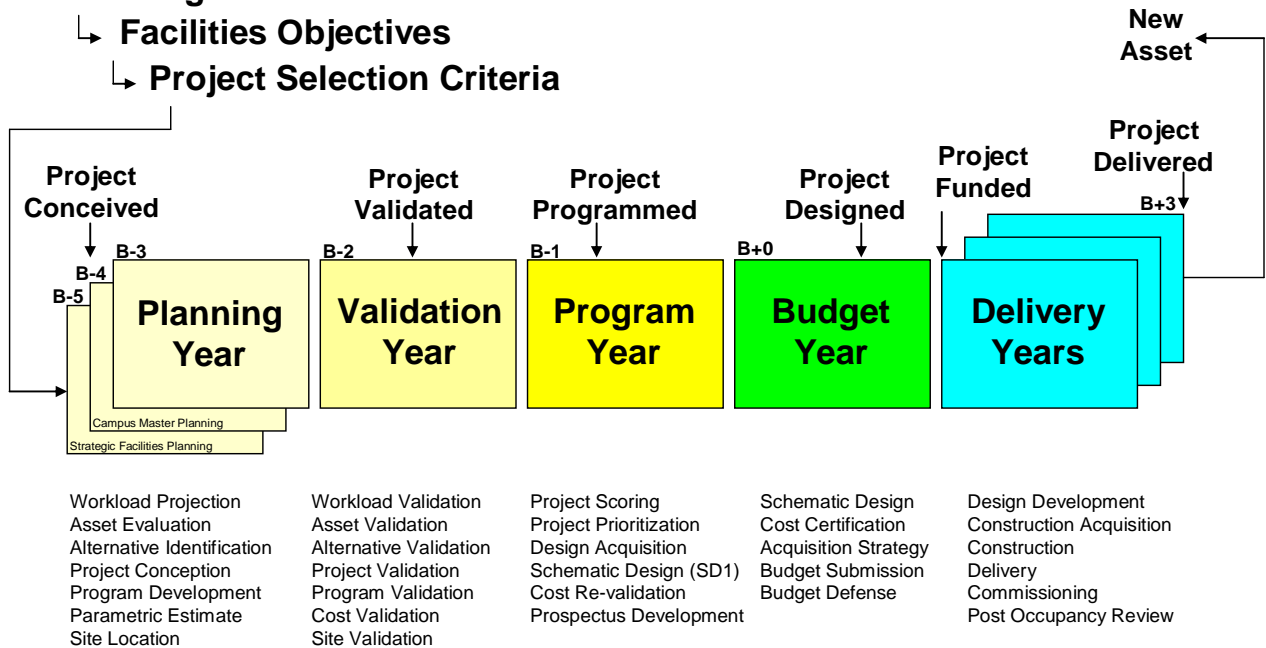
Long-term Focus and Constancy of Purpose

An effective investment strategy needs a long-term focus. Institutions such as Kings Point must continually validate capital investments through the repeated and thoughtful review of proposed projects. As shown in Figure 4 on the next page, a single major capital investment project should move through a multi-year planning, validation, programming, budgeting, and delivery process. This has not been the practice at Kings Point.

Strategic Capital Investment Process

Mission

- ↳ Strategic Plan
- ↳ Strategic Facilities Plan
- ↳ Facilities Objectives
- ↳ Project Selection Criteria



Functions by Process Year

Figure 4. An example of a multi-year planning, validation, programming, budgeting, and delivery process.

Components of an Effective Facilities Management Strategy

In summary, a comprehensive facilities management strategy for the USMMA would include four components:

- Strategically driven investments, based on credible management information and the institution's strategic objectives.
- Capable facilities management system, with expertise in all facets of facilities management, integrated into an efficient and effective business model.
- Robust technical capability, including the capability and capacity to meet continual planning, acquisition, and engineering demands.
- Demand-level programmatic investment, maintained at funding levels that allow proactive sustainment and planned recapitalization.

VI. Track Line to Sustain and Improve Facilities

Initiate Strategic Planning and Analysis

The Congressional mandate for the Merchant Marine Academy is very broad:

The Secretary of Transportation shall maintain the United States Merchant Marine Academy to provide instruction to individuals to prepare them for service in the merchant marine of the United States. (46 U.S.C. §51301)

This mandate allows the Secretary, the Maritime Administration and the Academy Superintendent broad latitude in choosing a curriculum that best fits the needs of the nation and the maritime industry. Currently, Kings Point maintains undergraduate programs in six different areas:

- Marine Transportation - A program combining nautical science and maritime business management.
- Maritime Operations and Technology - A marine transportation program enhanced with marine engineering studies.
- Logistics and Intermodal Transportation - A program combining nautical science and logistics and intermodal management.
- Marine Engineering - An engineering program focused on shipboard engineering operations.
- Marine Engineering Systems - An engineering program emphasizing marine engineering design.
- Marine Engineering and Shipyard Management - A program based on a marine engineering core and emphasizing the management of shipyards and other large engineering endeavors.

As a result of discussions with industry stakeholders, the Academy is currently developing a seventh academic program focusing on small vessel operations (specifically, the tug and barge industry). In support of this new initiative, the Academy included a “multiple tug simulator” in its 2009 list of proposed capital improvements. The Academy anticipates that this program will increase the size of the regiment by 150 midshipmen. As discussed in the Superintendent’s vision document “*Voyage to Excellence*,” the Academy also plans to become a center for maritime simulation training and applied research.

Although these efforts are laudatory, the Panel feels the future direction of the Academy should be guided by a thorough analysis of the industry and the future demand for merchant mariners. An analysis of this type will enable the Academy to develop a comprehensive Strategic Plan that links future industry needs to the Academy’s Facilities Master Plan. Beyond the Academy’s vision document (Appendix D), the Panel

was never presented with a cogent, comprehensive plan of this type for the Academy. The Panel believes it is essential that facilities planning and investment be linked to institutional goals and strategies.

Demand for Mariners → Academy Strategic Plan → Enrollment → Infrastructure Needs Assessment → Facilities Master Plan

The Maritime Administration has budgeted sufficient funds in FY10 to revise the Academy’s Facilities Master Plan. Before this Master Plan can be approved, it is essential that the Academy leadership and the Maritime Administrator jointly develop a new Strategic Plan for the Academy. The Maritime Administrator must play an active and informed role in this process, as the agency will be defending the Academy’s downstream requirements before the Office of the Secretary of Transportation, the Office of Management and Budget, and Congress.

Recommendation 1: The Academy and the Maritime Administration should jointly and promptly develop a Strategic Plan that links industry and U.S. national defense needs to Academy capital improvements. This plan should be supported by a thorough analysis of the future demand for merchant mariners, and a detailed facility needs assessment.

Improve Facilities Planning

Capital construction planning decisions at Kings Point are made by a standing committee of department heads, assisted by the safety officer, the Academy’s environmental specialist, and members of the faculty. These decisions are then executed by the Department of Engineering Resources.

By contrast, the U.S. Coast Guard Academy (USCGA), an institution of approximately the same size, has fully staffed Design, Construction, and Planning Sections. Together these three sections employ twelve engineers—including two architects, and civil, mechanical and electrical engineers—to manage 35 major buildings with 1.4 million square feet of space (see Table 1 below). An organizational chart of the entire USCGA Facilities Engineering Division is also provided as Appendix E.

Table 1: Comparison of USMMA and USCGA Support Staffs

School	Dedicated Planning Staff	Buildings	Square Feet Maintained	Maintenance Staff	Student Body
USMMA	None	44	976K	32	1000
USCGA	11	35	1.4M	65	973

Of the twenty projects listed in the USMMA Capital Improvement Plan and recommended to the Panel for funding, only eight of the projects had progressed beyond conceptual stage. Without a qualified facilities planning staff, no attempt had been made to integrate proposed projects to minimize construction costs. It is the opinion of the Panel that the USMMA is critically understaffed, so much so that it is unable to properly develop, control, and oversee the current Capital Improvement Plan, or the construction the campus so urgently needs.

Recommendation 2: The Academy should hire qualified staff to conduct facilities planning, oversee the Facilities Master Plan, and manage construction of future capital improvement projects. This staff should be consistent with the size and age of the facilities.

If the USMMA is unable to develop this capability internally, the Academy should attempt to enter into a long-term relationship with another federal organization that has robust facilities management capability. One potential long-term partner would be the Naval Facilities Engineering Command, which specializes in the sustainment of waterfront and campus facilities. High-level contact between the Maritime Administration and the Department of the Navy could establish this strategic partnership supported by a long-term reimbursable financial relationship.

Recommendation 3: The Maritime Administration should not initiate any major capital improvement projects until the Academy has the qualified staff necessary to properly oversee planning and construction.

Recommendation 4: Using a Strategic Capital Investment Process as a guide (see Figure 4), the Maritime Administration should establish and oversee a formal process governing the development of the USMMA's Capital Improvement Plan. Capital improvement projects forwarded by the Academy for funding should be consistent with the institution's approved Strategic Plan, and have sufficient initial design work accomplished to enable the preparation of valid cost estimates.

Improve Facilities Maintenance

The USMMA is authorized a maintenance staff of 32 to maintain 44 buildings, most of which are over 66 years old. By comparison, USCGA has a maintenance staff of 61 employees to maintain a campus of 35 buildings of varying ages (see Table 1 above, and Appendix E). As with the USMMA's facilities planning staff, it is the opinion of the Panel that the Academy Maintenance and Repair Department is critically understaffed. Current staffing is insufficient to support routine maintenance of the campus and, along with a lack of funding, has contributed to a more rapid than normal deterioration in the condition of the Academy's facilities. A complete list of the Academy's maintenance backlog is provided in the Academy's Capital Improvement Plan, Appendix F.

Recommendation 5: The Academy should have sufficient qualified staff to conduct routine facilities maintenance. This staff should be consistent with the size and age of the facilities.

Increase and Restructure Investment Funding

When compared to the USCGA, it is clear that the USMMA's maintenance funding has been woefully insufficient (see Figure 5 below). The result has been a rapid decline in midshipmen living conditions, condition of academic and athletic buildings, and the safety of the Academy's pier complex, among others.

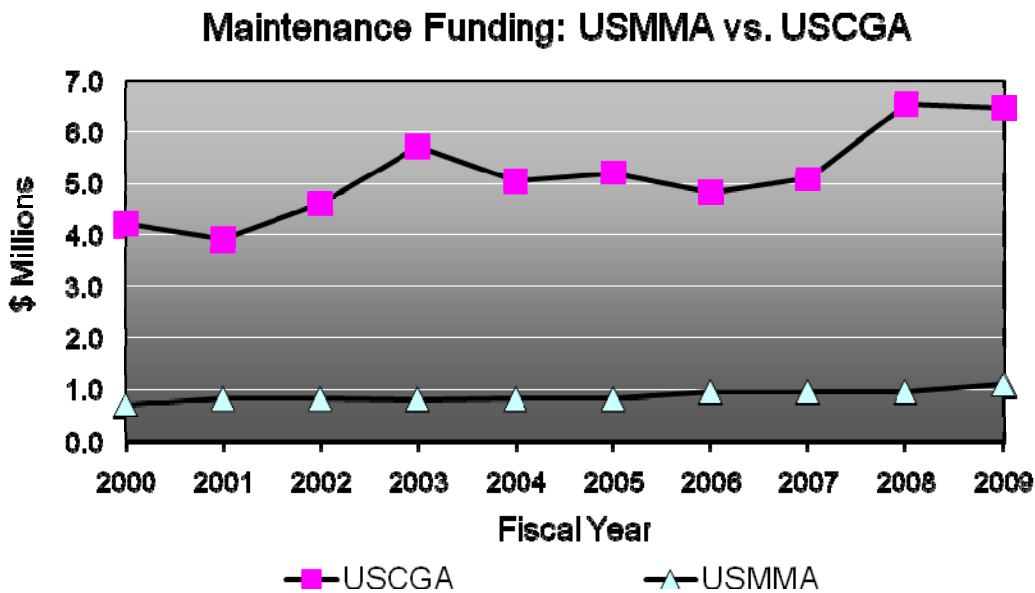


Figure 5. Comparison of USMMA and USCGA maintenance expenditures.

In addition, a dedicated stream of funding has not been provided for the life-cycle replacement of critical educational equipment such as maritime simulators. It is the opinion of the Panel that the budget of the USMMA should be increased and restructured to provide separate funding for capital investment, routine maintenance, and the phased replacement of equipment. A notional budget, prepared by the Panel, is provided below as Table 2. A more detailed notional budget is provided as Appendix G.⁴

⁴ The notional budget information was prepared for the panel by Mr. Allan Titus, of the Federal Law Enforcement Training Center, in Glynco, GA.

Table 2: Notional Budget for the USMMA FY11-FY15 (Phase I)

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
Inflation Factor			0.018	0.018	0.018	0.018
Annual Operating Funds	\$ 59,000,000	\$ 68,700,000	\$ 69,936,600	\$ 71,195,459	\$ 72,476,977	\$ 73,781,563
Equipment Replacement	-	3,000,000	3,054,000	3,108,972	3,164,933	3,221,902
Maintenance and Minor Construction		3,000,000	3,054,000	3,108,972	3,164,933	3,221,902
Capital Improvement Projects	15,400,000	33,719,000	33,921,000	37,927,778	35,408,000	34,774,000
Total Funding Requirement	\$ 74,400,000	\$ 108,419,000	\$ 109,965,600	\$ 115,341,181	\$ 114,214,843	\$ 114,999,367

Recommendation 6: Consistent with the sustainment, restoration, and modernization approach to life-cycle facility management, Merchant Marine Academy funding should be restructured to provide for three separate funding streams: facilities maintenance, equipment, and capital improvements.

Recommendation 7: The USMMA requires significant capital investment to renovate existing structures, and replace those that no longer meet the needs of a modern educational institution. These investments should be consistent with a Strategic Plan, and funding should be provided only after the Academy has a sufficient staff to properly oversee construction.

Recommendation 8: The USMMA requires significant additional funding to support facility maintenance and to prevent further degradation of the condition of the campus. To support this additional funding, the Academy should accurately identify the Plant Replacement Value (PRV) of all the facilities on the campus.

Recommendation 9: The USMMA requires additional equipment funding to replace existing maritime simulators and other electronic teaching aids, which are critical to maintaining the Academy's level of educational excellence.

Leverage Educational Technology

The Academy's Strategic Plan, and the forthcoming review of its Facilities Master Plan (scheduled for FY10), should maximize the use of new educational technologies in the future construction and renovation of USMMA facilities. These should include "blended learning" approaches such as digitally enhanced classroom instruction, distance learning, immersive simulations, and interactive instruction. Animated computer demonstrations and collaborative multi-player simulations support higher order problem solving, and demand from the learner a much higher level of analysis.

Blended learning technologies have been shown to cost effectively enhance learning and student performance. These technologies permit larger class sizes, reduce the resources required to conduct the training, reduce training time, and improve student retention. They also allow for easy reuse and re-distribution of training materials. Learning aids can be transmitted directly to the midshipmen at the Academy, or while aboard ship during their at-sea semester.

The Academy already uses simulation equipment to provide bridge and navigation training. Other areas that are conducive to a virtual training include:

- Damage Control
- Docking
- Anti-piracy tactics
- Virtual sea trials
- Chemical, Biological and Radiological Defense
- Voyage planning
- Accident Investigation
- Fire-fighting

The Panel believes that a methodical, well-planned training modernization initiative should be integrated into the Academy's Strategic Plan. The Plan should identify the appropriate mix of classroom, hands on, and simulation based instruction. It should also:

- Leverage existing technological capabilities to cost effectively increase quality and quantity of instruction;
- Develop and promulgate specifications for integrating digitally enhanced classroom instruction, constructive simulations, and interactive instruction into the design new and renovated facilities;
- Develop the IT infrastructure to support these new technologies; and
- Ensure the cost of technology is included in the design of new or renovated facilities⁵

Recommendation 10: USMMA's Strategic Plan should aggressively leverage new, cost effective learning technologies to improve the quality of instruction and minimize cost.

Review the Investment Timeline

The Panel does not believe that the proposed timeline of five and ten years (Phase I and Phase II) is sufficient. The current list of capital improvement projects is extensive (see Table 3). Even if funding were made available, it will take ten to fifteen years to properly design and construct these facilities.

⁵ Adapted from a paper prepared for the Panel by Mike Hanneld and Val Atkins of the Federal Law Enforcement Training Center, Glynco, GA.

Table 3: 2010 Cost Estimates for USMMA Capital Improvement Projects

<u>No.</u>	<u>Project</u>	<u>Cost (\$)</u>
1.	Rogers Hall Dormitory Renovation	14,037,232
2.	Cleveland Hall Dormitory Renovation	17,419,386
3.	Delano Hall Renovation (Midshipmen galley)	21,547,482
4.	Academic Buildings Renovation (four buildings)	
4(a).	Samuels Hall	5,650,589
4(b).	Bowditch Hall	12,791,715
4(c).	Fulton Hall	27,255,059
4(d).	Gibbs Hall	15,138,840
5.	Academic Technology Building	25,238,263
6.	Bland Library Expansion	23,495,925
7.	Bridge Simulator	1,221,703
8.	LNG Simulator	3,368,762
9.	Steam Machinery and Gas Turbine Lab (Replacement)	2,753,591
10.	Dormitory Support Services Renovation	10,110,172
11.	Tug/Barge Simulator (new)	1,818,088
12.	Laboratory Hardware Software Updates	377,530
13.	Engineering Laboratory Addition to Fulton Hall	5,594,083
14.	Reconstruction of Gibbs Lecture Hall	1,248,883
15.	Waterfront Pier Replacement	
15(a).	Dredging Material is Not Contaminated	42,729,765
15(b).	Dredging Material is Contaminated	69,518,648
16.	Emergency Generator, Wiley Hall	450,487
17.	Emergency Generator, Yocum Sailing Center	220,391
18.	New Student Center	10,716,674
19.	Physical Education Building	40,319,266
20.	Regimental Band Room and Ceremonial Center	16,999,772

Recommendation 11: The Maritime Administration and the Department of Transportation should revise the proposed capital improvement program to provide for sustained and substantially increased phased investment over the next ten to fifteen years.

VII. Recommended Capital Improvement Projects

Investment Priorities

In preparing its final recommendations, the Panel took into account a number of factors including the Academy's core missions, midshipmen safety and welfare, maritime licensing requirements, overall academic excellence (particularly in the field of maritime engineering), life-cycle asset management, and energy efficiency.

Understanding that the 2010 Academy budget provides funding to stem further deterioration of the pier facility and improve its interior portions, the Panel strongly believes that more emphasis should be placed on improving non-waterfront facilities that support midshipmen health and welfare, midshipmen professional development and recruiting. These specifically include the dining facility, barracks, and athletic facilities. The Academy has strong maritime engineering and operations programs. The facilities, including laboratories and simulators, that support these programs need to be upgraded to deliver the full spectrum of skills today's graduates require.

Recommended Projects

The Panel thoroughly reviewed the capital improvement projects contained in the Academy's current Capital Improvement Plan. The Panel's opinion is that it is premature to forward a specific, prioritized list of projects without the Academy and Maritime Administration having first developed a detailed Strategic Plan that links capital investments to approved long-term strategic objectives for the Academy (which we hope will be developed soon). This is especially true for Phase II projects (FY16-FY20). That said, the Panel strongly believes there is an urgent need to fund projects that focus on midshipmen habitability, new educational technology, and the modernization of the school's engineering laboratories. A matrix displaying an approach to prioritizing investment is provided as Appendix H. Such an approach would place the remaining unrenovated dormitories, the galley, the athletic facilities, and the replacement simulators near the top of the list. Once the Academy's Strategic Plan has been completed and approved, the Secretary of Transportation, the Administration and the Congress can better prioritize future investment.

VIII. Conclusions and Recommendations

After the first visit to the Academy grounds, it was evident to the Panel that the Merchant Marine Academy facilities are in dire need of significant repair and replacement. Rather than simply prioritize the current Capital Improvement Plan and increase investment, it was abundantly clear that the USMMA also needs: (1) Additional, sustained base funding to support facilities maintenance and life-cycle replacement of equipment; (2) Additional qualified staff to manage the maintenance of the Academy's buildings and infrastructure; and (3) The engineering and planning staff to oversee new construction and renovation projects, and to help plan future investments. With these in place, the Academy will be a position to manage the capital investment necessary to promote academic excellence and reverse years of neglect.

Failure to provide adequate funding and a maintenance organization to administer this funding has led to the overall deterioration of USMMA facilities. A substantially increased, balanced and more sustained capital investment program should be undertaken immediately. The deplorable conditions that currently exist did not occur overnight, and it will take a ten to fifteen year commitment to reverse the current trend. In addition to upgrading the physical plant, the Academy must develop a program to systematically recapitalize the Academy's furniture, equipment, technology, and infrastructure.

If funding is not substantially increased, the plant will continue to deteriorate, leading ultimately to a facility "death spiral." Overall funding should be consistent with modern federal asset management planning and take into account the number and age of the buildings at the USMMA. Doubling the current capital investment level would be a responsible start, but any investment must be accompanied by the funding necessary to ensure maintenance, repair, and replacement of these assets. Any further investment in USMMA facilities without first having a system in place to maintain the campus, and the staff to properly supervise new construction is neither recommended nor advisable.

It is important that the Maritime Administration and the USMMA look hard at "how they got where they are" before moving forward. A new management system must be implemented so that the Academy does not find itself in this same situation in the future. The Superintendent, in conjunction with MARAD, must determine the Academy's strategic direction, and frame a capital investment strategy to achieve the facility goals of the institution. FLETC, USCGA, DOD, and Veterans Affairs all have models that could be followed which provide a system for maintenance, project planning, and construction oversight.

Recommendations of the Panel

Recommendation 1: The Academy and the Maritime Administration should jointly and promptly develop a Strategic Plan that links industry and U.S. national defense needs to

Academy capital improvements. This plan should be supported by a thorough analysis of the future demand for merchant mariners, and a detailed facility needs assessment.

Recommendation 2: The Academy should hire qualified staff to conduct facilities planning, oversee the Facilities Master Plan, and manage the construction of future capital improvement projects. This staff should be consistent with the size and age of the facilities.

If the USMMA is unable to develop this capability internally, the Academy needs to enter into a long-term relationship with another federal organization that has robust facilities management capability. One obvious potential long-term partner would be the Naval Facilities Engineering Command, which specializes in sustainment of waterfront and campus facilities. High-level contact between the Maritime Administration and the Department of the Navy could establish this strategic partnership supported by a long-term reimbursable financial relationship.

Recommendation 3: The Maritime Administration should not initiate any major capital improvement projects until the Academy has hired the qualified staff necessary to properly oversee planning and construction.

Recommendation 4: Using a Strategic Capital Investment Process (See Figure 4) as a guide, the Maritime Administration should establish and oversee a formal process governing the development of USMMA's Capital Improvement Plan. Capital improvement projects forwarded by the Academy for funding should be consistent with the institution's approved Strategic Plan, and have sufficient initial design work accomplished to enable the preparation of valid cost estimates.

Recommendation 5: The Academy should hire sufficient qualified staff to conduct routine facilities maintenance. This staff should be consistent with the size and age of the facilities.

Recommendation 6: Consistent with the sustainment, restoration and modernization approach to life-cycle facility management Merchant Marine Academy funding should be restructured to provide for three separate funding streams: facilities maintenance, equipment, and capital improvements.

Recommendation 7: The USMMA requires significant capital investment to renovate existing structures, and replace those that no longer meet the needs of a modern educational institution. These investments should be consistent with a Strategic Plan, and funding should be provided only after the Academy has hired sufficient staff to properly oversee construction.

Recommendation 8: The USMMA requires significant additional funding to support facility maintenance and to prevent further degradation of the condition of the campus. To support this additional funding, the Academy should accurately identify the Plant Replacement Value (PRV) of all the facilities on the campus.

Recommendation 9: The USMMA requires additional equipment funding to replace existing maritime simulators and other electronic teaching aids, which are critical to maintaining the Academy's level of educational excellence.

Recommendation 10: USMMA's Strategic Plan should aggressively leverage new, cost effective learning technologies such as desktop simulators, and engineering laboratory electronic troubleshooting replicators to improve the quality of instruction and minimize cost.

Recommendation 11: The Maritime Administration and the Department of Transportation should revise the proposed capital improvement program to provide for sustained and substantially increased phased investment over the next ten to fifteen years.

Finally, and most critical to reversing the current situation, all involved need to be guided by the Academy's own motto:

ACTA NON VERBA - DEEDS NOT WORDS

Appendix A: Panel Member Biographies

Vice Admiral Thomas Barrett, USCG (Ret.), Deputy Federal Coordinator, Alaska Natural Gas Transportation Projects



Vice Admiral Thomas J. Barrett, USCG (Ret.) became the Deputy Federal Coordinator for Alaska Natural Gas Transportation Projects on May 26, 2009. The Deputy Federal Coordinator will be located in the Anchorage Office of the Federal Coordinator (OFC).

Like the Federal Coordinator, Barrett in his role as Deputy Federal Coordinator, will direct the activities and authorities vested in the OFC while also managing the critical Alaska field office.

Before joining the OFC, Barrett served as the Deputy Secretary of the United States Department of Transportation. He was confirmed on August 8, 2007 and served until May 23, 2009. As Deputy Secretary, Barrett ensured that the United States and its citizens had a safe, efficient, and reliable transportation system that met vital national

interests and enhanced the quality of life for Americans today and into the future. Deputy Secretary Barrett served as the Department's chief operating officer, responsible for the day-to-day management of DOT's \$61.1 billion budget, 10 modal administrations, and approximately 60,000 employees.

Barrett also served as the first Administrator of the Pipeline and Hazardous Materials Safety Administration (PHMSA), directing the agency's national program for protecting against risks to life and property inherent in the transportation of hazardous materials in commerce and the transportation of liquid, natural gas, petroleum, and other hazardous liquids by pipeline.

Before becoming PHMSA Administrator, Barrett was the Vice President and Chief Operating Officer of the Potomac Institute for Policy Studies. Prior to that, he served 35 years in the United States Coast Guard and attained the position of Vice Commandant. He also commanded Coast Guard operations in Alaska and the North Pacific from 1999 to 2002. Barrett and his family lived in Alaska for 14 years during his Coast Guard career.

Barrett earned a B.S. in Biology from LeMoyne College, Syracuse, N.Y., and a Juris Doctor with honors from the George Washington University. He is a graduate of the Army War College and the National Defense University Capstone Course in National Security Strategy and Military Capabilities.

General Duncan J. McNabb, Commander, U.S. Transportation Command



General McNabb graduated from the U.S. Air Force Academy in 1974. A command pilot, he has amassed more than 5,400 flying hours in transport and rotary wing aircraft. He has held command and staff positions at squadron, group, wing, major command and Department of Defense levels. During operations Desert Shield and Desert Storm, General McNabb commanded the 41st Military Airlift Squadron, which earned Military Airlift Command's Airlift Squadron of the Year in 1990. The general commanded the 89th Operations Group, overseeing the air transportation of our nation's leaders, including the President, Vice President, Secretary of State and Secretary of Defense. He then served as Commander of the 62nd Airlift Wing. The wing's performance in 1996 earned the

Riverside Trophy as the 15th Air Force's outstanding wing. He also commanded the Tanker Airlift Control Center and Air Mobility Command.

General McNabb's staff assignments have been a variety of planning, programming and logistical duties. These include serving as the Deputy Chief of Staff for Plans and Programs on the Air Staff and Chairman of the Air Force Board having oversight of all Air Force programs. He also served as the Director for Logistics on the Joint Staff where he was responsible for operational logistics and strategic mobility support to the Chairman of the Joint Chiefs of Staff and the Secretary of Defense. Prior to his current assignment, he was Vice Chief of Staff.

Ms. Connie L. Patrick, Director Federal Law Enforcement Training Center



Director Connie Patrick was selected the fifth Director of the Federal Law Enforcement Training Center (FLETC) in July 2002. Previously, Director Patrick spent over six years in various FLETC Associate Director positions. She provides oversight to the training of the majority of federal officers and agents. FLETC services more than 85 federal agencies; provides training to state, local, and international police in selected advanced programs; graduates approximately 50,000 students annually; and is the largest law enforcement training operation throughout the country.

Headquartered on approximately 1,600 acres at Glynco, near Brunswick, Georgia, the FLETC also operates facilities in Artesia, New Mexico; Charleston, South Carolina; Cheltenham, Maryland; and the International Law Enforcement Academies at Gaborone, Botswana and San Salvador, El Salvador.

Prior to her appointment at the FLETC, Director Patrick completed a distinguished 20-year sworn law enforcement career in Florida, starting in 1976 as a deputy with the Brevard County Sheriff's Office. In 1981, she became a Special Agent with the Florida Department of Law Enforcement (FDLE). She was promoted to Special Agent Supervisor, Assistant Special Agent in Charge of the Tampa Regional Operations Bureau, Special Agent in Charge of the FDLE Intelligence and Investigative Support Bureau, Director of the Florida Criminal Justice Executive Institute in Tallahassee, and Director of the Division of Human Resources and Training.

She received numerous awards, including the Distinguished Presidential Rank Award and the Presidential Meritorious Rank Award, the government's highest Civil Service awards. She holds a Bachelor of Arts degree in Criminal Justice from the University of Central Florida.

Rear Admiral J. Scott Burhoe, USCG, Superintendent of the U.S. Coast Guard Academy



Rear Admiral J. Scott Burhoe currently serves as the 39th Superintendent of the U.S. Coast Guard Academy. He reported to this position from Coast Guard Headquarters where he served as Assistant Commandant for Governmental and Public Affairs.

Prior to his position at CG Headquarters, he served as Commanding Officer at Training Center Yorktown, Virginia. Yorktown is the same place he earned his commission after graduating from Officer Candidate School in 1977. His first assignment out of OCS was to lead the USCG Ceremonial Honor Guard in Washington, DC.

In over 30 years of public service, he has served in a variety of operational and staff assignments including Executive Officer and Alternate Captain of the Port, Coast Guard Station New London, CT, Commanding Officer, Station Fort Lauderdale, FL, and Group Commander, Group Sandy Hook, NJ.

Rear Admiral Burhoe's staff assignments have been focused primarily in the human resource specialty at Training Center Cape May, the USCG Academy with the Leadership Development Center, Training Center Yorktown, VA, Coast Guard Headquarters, and as the Chief of the Officer Personnel Management Division at the Coast Guard Personnel Command.

He graduated from Virginia Polytechnic Institute and State University with a Bachelor's degree in Sociology, and earned a Master of Public Administration from The American University in Washington, DC. His awards include the Legion of Merit, three Coast Guard Meritorious Service Medals, and three Coast Guard Commendation Medals.

Mr. Donald Orndoff, former Director, Office of Facilities Construction and Management, Department of Veterans Affairs



While a part of the Panel, Mr. Donald H. Orndoff was the Director of the Office of Construction & Facilities Management at the Department of Veterans Affairs. He led a team of engineers, architects, and real estate professionals who proudly serve our Nation's veterans. His team plans, designs, constructs, and leases facilities for the Veterans Health Administration, our nation's largest integrated health care system, the Veterans Benefits Administration, and the National Cemetery Administration. Replacement plant value of VA facilities exceeds \$56 billion, with new construction and major improvements approaching \$1 billion project value per year.

In July 1978, Mr. Orndoff was commissioned an Ensign, Civil Engineer Corps, United States Navy. As a junior officer, he was charged with progressively greater leadership responsibilities in construction and facility management at major Navy bases across the country. He proudly served in the Navy Seabees as Company Commander and Detachment Officer in Charge in a Naval Mobile Construction Battalion, where he made construction deployments to Guam and the Philippines in support of Navy Fleet operations.

In December 1997, Mr. Orndoff became the Assistant Chief of Staff for Shore Installation Management on the Commander U.S. Naval Forces Japan Staff, with regional responsibilities in shore facilities construction and maintenance, real estate acquisition and disposal, shore installation operations management, environmental compliance, and Navy occupational safety programs. In May 2001, Mr. Orndoff became Commanding Officer, Public Works Center Yokosuka, Japan, Officer in Charge of Construction Far East, and Force Civil Engineer. He led a 1,200 personnel workforce in support of six major Navy installations providing over \$500 million facility construction management services annually, in coordination with host countries Japan, South Korea, and British Indian Ocean Territories. In August 2003, Mr. Orndoff became the Assistant to the Commander for Navy Public Works, Naval Facilities Engineering Command. He developed enterprise processes, resource objectives, and community management support for the Navy's 9,000 member global public works team. He led Navy efforts in four major public works product lines, including Utilities and Energy Management, Facility Management, Facility Sustainment, and Facility Services.

In July 2007, Mr. Orndoff retired from active duty after 29 years of service. He was universally recognized as an innovative leader among the Navy civil engineer community. Three times he was awarded the prestigious Legion of Merit for meritorious leadership, service, and accomplishment.

Mr. Orndoff graduated with a Bachelor of Architecture degree from Virginia Tech University in 1978. He graduated with Master of Engineering Science degree in Construction Engineering from the University of California at Berkeley in 1983. He also received Executive Business Management training from Dartmouth College in 2000. Mr. Orndoff is a licensed Registered Architect in Virginia. He is a member of the American Institute of Architects, Society of American Military Engineers, and Federal Acquisition Professional Community.

Major General William H. Johnson, Chief of Staff, United States
Transportation Command



Maj. Gen. William H. Johnson is the Chief of Staff, United States Transportation Command, Scott Air Force Base, Ill. He is responsible to the Commander for the effective coordination of all staff activities in a global command of 156,000 personnel. USTRANSCOM is engaged in around-the-clock transportation planning and support to the Department of Defense and its war fighting unified commands.

Maj. Gen. Johnson earned a bachelor's degree in business administration from North Georgia College and a Master of Science degree in business management from Boston University. He is a graduate of the Armor Officer Basic Course, Officer Rotary Wing Aviator Course, Transportation Officer Advanced Course, U.S. Army Command and General Staff College and U.S. Army War College. General Johnson has commanded at section, company, battalion, and brigade levels and the 143rd TRANSCOM (FWD) and the 99th Regional Readiness Command.

**Appendix B: U.S. Merchant Marine Academy Capital
Improvements Advisory Panel Charter**

Charter for the United States Merchant Marine Academy Capital Improvements Advisory Panel (Amendment 1)

Purpose

The Secretary and, by delegation, the Maritime Administrator are charged with the administration of the United States Merchant Marine Academy (USMMA), in Kings Point, New York. The United States Merchant Marine Academy Capital Improvements Advisory Panel shall review the adequacy and suitability of the USMMA's facilities, taking into account the USMMA's Capital Improvement Plan (CIP), and advise the Administrator on the priority and efficacy of projects that should be undertaken.

Function

Using cost and construction information validated by an independent engineering firm or outside federal agency, the Panel shall review selected projects for inclusion in the Academy's capital improvement budget for FY 2010-2015 (Phase I), and FY2015-20 (Phase II). For the purposes these deliberations, the Panel will assume Phase I capital improvement funding of \$20-30 million per year or \$100-150 million for a 5-year period. Phase II projects will be prioritized without respect to funding constraints.

Structure

The Advisory Panel shall consist of five voting members, including a chair. All panel members shall be current employees of the federal government. The Administrator shall select the panel members and the chair. In addition to the voting members, the Administrator may include three non-voting members from the Maritime Administration, and one non-voting member from the USMMA.

Members shall be selected for their knowledge of: (1) The maritime industry; (2) The management, and administration of federal academies or academic institutions; and (3) Current engineering and construction practices. The Panel shall be assisted by a Senior Executive Support Team, an Executive Secretary, and other support staff as necessary.

Meetings

The Panel shall meet at times and locations determined by the Chair. A Maritime Administration official shall be present at all meetings. Three voting members shall constitute a quorum. Meetings shall not be open to the public except as determined otherwise by the Administrator. Meetings shall be conducted, and records of the proceedings will be kept as required by applicable laws and Departmental regulations.

Compensation

Members will be reimbursed for travel to and from Panel meetings in accordance with current Federal Travel Regulations.

Reports

The Panel shall prepare and submit a formal report to the Secretary of Transportation. The report will contain the function of the panel, a list of members, and their business addressees, the dates and places of meetings, and a summary of the panel's activities and recommendations.

Termination Date

Unless renewed by appropriate action prior to its expiration, the appointment of the Advisory Panel for Capital Improvements to the USMMA will remain in effect until March 1, 2010, or until such date that the findings of the Panel have been accepted by the Secretary of Transportation.

Panel Members

Thomas J. Barrett (Chair)
Acting Deputy Secretary of Transportation
Office of the Secretary of Transportation
1200 New Jersey Ave., SE
Washington, DC 20590


RADM J. Scott Burhoe, USCG
Superintendent
United States Coast Guard Academy
15 Mohegan Avenue
New London, Connecticut 06320-8100

Ms. Connie L. Patrick
Director
Federal Law Enforcement Training Center
1131 Chapel Crossing Road
Glynco, Georgia 31524


Gen. Duncan J. McNabb, USAF
Commander
United States Transportation Command
Scott Air Force Base, Illinois 62225

Mr. Donald Orndoff
Director, Office of Construction and Facilities Management (00CFM)
Department of Veterans Affairs
810 Vermont Ave. NW
Washington, New York, NY 20420

Approved



David T. Matsuda
Acting Maritime Administrator



Date

**Appendix C: U.S. Merchant Marine Academy
Capital Improvement Plan: Cost Estimate
(Separate document--dated July 15)**

Appendix D: USMMA “Voyage to Excellence”



“VOYAGE TO EXCELLENCE”

THE VISION: DR. SHASHI KUMAR (DEAN) AND RADM ALLEN WORLEY (SUPT)

U. S. Merchant Marine Academy becomes:

1. The Jewel of the U.S. service academies
2. The global leader in maritime education, training, simulation and applied research
3. The foremost authority in maritime security and anti-piracy education

1. Why USMMA should become a service academy jewel

- The pride and prestige of a U.S. Service Academy (National balance and Congressional Support for Mission, tradition of sacrifice and service)
- The only service academy outside of DOD and DHS (Economic Mission that is foundation of our National Security)
- Widely acknowledged international expertise in maritime and intermodal operations and education

Impediments

- Aging/dated infrastructure (66 years plus), insufficient permanent faculty (need 100) and authority (funding) to increase student enrollment to 1200 to yield a graduation rate of 250/yr to help meet the current demands of the maritime industry.

2. Why USMMA should become a global leader in maritime education, training, simulation and applied research

- World maritime education and our maritime industrial system in America are at a crossroad, crying out for leadership. With the notable exception of the U.S., the historical leadership in maritime education provided by traditional maritime nations collapsed over the last three decades because of changing national priorities. The rapidly emerging new maritime nations do not have the expertise or the wherewithal to provide global leadership in maritime education.
- USMMA has resident expertise to establish and manage centers of excellence in the two traditional domains of maritime education and training, specifically in navigation and engineering. These centers of excellence will become the nexus of applied maritime research and education imparting cutting edge knowledge and service to the nation and the transportation and logistics sectors at large, developing maritime educators and leaders for the future.
 - Establish a Center of Excellence in Integrated Navigation Training and Simulation to provide the best mariner education for safety at sea and pollution prevention and ocean environment protection
 - Integrated navigational watchkeeping and cargo handling simulation capability

- Establish a state-of-the-art education program specifically focused toward educating merchant mariners for the sea lanes, marine highways and inland waterways
- Establish a Center of Excellence in Marine Engineering and Applied Research to provide advanced education, and facilitate research and scholarship in:
 - Alternative energy programs with maritime application
 - Greening of the seas, ports and the environment (sea and air)

Impediments

- Insufficient and aging faculty (base funding adjustment needs)
- High cost of living that dissuades young talented faculty from moving to the region (improved/increased faculty housing)
- Falling behind competing institutions domestically and internationally in terms of resource availability and state-of-the art high-tech educational facilities (infrastructure upgrades and new facilities)

3. Why USMMA should become the foremost authority in maritime security and anti-piracy education

- The fundamental rationale for maintaining a U.S.-flag maritime presence today is national security and is still relevant.
- USMMA is the only maritime academy in the nation where **every** student is a member of the regiment of midshipmen, receives a USCG license and a commission in the armed forces in addition to receiving a baccalaureate degree and a commitment to America.
- As the nation's only federal merchant marine academy, USMMA is ideally placed to provide leadership for secure operation of merchant ships and anti-piracy initiatives. All academy graduates receive basic training in this regard and should receive advanced training to deter escalation of maritime piracy and provide needed industry leadership and understanding.

**Appendix E: U.S. Coast Guard Academy Facilities
Engineering Division Organizational
Chart**

**Appendix F: USMMA 2008 Capital Improvement Plan
(Separate document)**

Appendix G: USMMA Notional Budget

United States Merchant Marine Academy Funding Request- Consolidated

Inflation Factor	0.018					0.018				
	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
Annual Operating Funds	\$ 59,000,000	\$ 68,700,000	\$ 69,936,600	\$ 71,195,459	\$ 72,476,977	\$ 73,781,563				
Equipment Replacement	-	3,000,000	3,054,000	3,108,972	3,164,933	3,221,902				
Maintenance and Minor Construction		3,000,000	3,054,000	3,108,972	3,164,933	3,221,902				
Capital Improvement Projects	15,400,000	33,719,000	33,921,000	37,927,778	35,408,000	34,774,000				
Total Funding Requirement	\$ 74,400,000	\$ 108,419,000	\$ 109,965,600	\$ 115,341,181	\$ 114,214,843	\$ 114,999,367				

United States Merchant Marine Academy Funding Request - Capital Improvements

	Cost (\$)	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
<u>Facility Capital Improvements Unallocated</u>		79,000		1,000,000	1,000,000	1,000,000	1,000,000
<u>Project Description</u>							
Mallory Pier Reconstruction and Dredging	15,321,000	15,321,000					
Delano Hall Renovation (Galley)	22,840,000		18,840,000	4,000,000			
Rogers Hall Dormitory Renovation	14,879,000		14,879,000				
Cleveland Hall Dormitory Renovation	19,572,000			19,572,000			
Samuels Hall	6,349,000			6,349,000			
Gibbs Hall	18,030,000			3,000,000	15,030,000		
Engineering Laboratory Addition to Fulton Hall	6,662,642				6,662,642		
Bowditch Hall	15,235,136				15,235,136		
Fulton Hall	34,408,000					34,408,000	
Academic Technology Building	33,774,000						33,774,000
Dormitory Support Services Renovation	Phase II						
Physical Education Building (New)	Phase II						
New Student Center	Phase II						
Cressy Pier	Phase II						

United States Merchant Marine Academy Funding Request - Capital Improvements

Crownshield Pier	Phase II							
Bland Library Expansion	Phase II							
Regimental Band Room and Cerm. Center	Phase II							
Total Capital Improvement Funding		15,400,000	33,719,000	33,921,000	37,927,778	35,408,000	34,774,000	

United States Merchant Marine Academy Funding Request- Equipment Replacement

Inflation Factor	FY 2010	FY 2011	0.018 FY 2012	0.018 FY 2013	0.018 FY 2014	0.018 FY 2015
<u>Equipment Replacement Unallocated</u>						
Kings Pointer Dry-docking		19,302	45,028	44,039	58,984	271,902
Replace Bridge Simulator		1,200,000				
LNG Simulator		1,221,703				
Steam Machinery and Gas Turbine Lab		558,995	3,008,972	217,173		
Tug/Barge Simulator				2,554,386	2,001,910	
Laboratory Software/Hardware Updates				293,374	377,530	
Emergency Generator Wiley Hall (COOP)					568,729	
Emergency Generator Yocum Center (COOP)					157,780	
Emergency Generator Samuel Hall						284,587
Emerg. Generator Academic & Admin Bldgs						300,000
Diesel Engine lab replacement						1,500,000
Radar Lab Replacement						400,000
Electronic Chart Simulators						400,000
Campus Fiber Network Extensions						
Navigation and Com. Lab Replacement						65,413
<u>Total Annual Equipment Funding</u>	-	3,000,000	3,054,000	3,108,972	3,164,933	3,221,902

United States Merchant Marine Academy Funding Request – Maintenance

Inflation Factor	FY 09 Carryover	FY 2010	FY 2011	0.018 FY 2012	0.018 FY 2013	0.018 FY 2014	0.018 FY 2015
<u>Facility Maintenance and Minor Construction Unallocated</u>	133,000			94,000	108,972	1,498,933	3,221,902
<u>Project Description</u>							
Major Ceiling repairs - Wiley Hall	500,000						
Elevator repairs (various locations)	380,000						
Rehabilitate Academy Electrical Supply	300,000						
Erect Safety Railings at Museum	170,000						
Fire protection system- Wiley Hall	150,000						
Repair uneven floor on 2nd deck	100,000						
Asbestos tile abatement (various locations)	140,000						
Lead abatement in staff quarters	80,000						
Building ID for first responders	75,000						
Replace ceiling over pool area	70,000						
Fire Hydrant repairs	45,000						
Fire Alarms - Barry/Jones Halls	25,000						
Seawall Rehabilitation	1,832,000						
Reconstruction of Gibbs Lecture Hall			1,352,000				
Shower Repairs-Forsyth/O'Hara/Brooks /Delano			397,000				
Replace ext. water main valve (various locations)			76,000				
Roof Replacement (Various Buildings)			1,175,000	839,000			
ADA Accessibility improvements				1,034,000			

United States Merchant Marine Academy Funding Request – Maintenance

Replace exterior windows-Fulton/Gibbs						518,000				
Replace exterior windows-Bowditch/Samuels						569,000				
Waterproof limestone academic & support bldgs							642,000			
Repair/replace sidewalks and roadways							621,000			
Replace three transformers							336,000			
Security Fence around academy							1,401,000	705,000		
Lead abatement and interim controls								148,000		
Upgrade Ackerman Auditorium								126,000		
Restroom renovations Wiley Hall								105,000		
Extend Guardrail to 42" on all academic bldg								105,000		
Chapel interior painting								105,000		
Eldridge Pool re-piping drainage system								100,000		
Work station office in academy receiving stores								79,000		
Reconstruct stone walkway on waterfront hillside								47,000		
Renovate deteriorated academy greenhouse								47,000		
Refurbish campus-wide clock system								47,000		
Install Fire Alarm system Barry/Jones Hall								26,000		
Re-lamping in key accessibility areas								26,000		
Total Recurring and Minor Maintenance	4,000,000	-	3,000,000	3,054,000	3,108,972	3,164,933	3,221,902			

**Appendix H: Matrix Developed by the USMMA
Capital Improvement Advisory Panel**

Capital Improvement Project Matrix

		Evaluation Factors							
<u>Project</u>	Cost (Mil)	Safety	Student Habit. & Welfare	Direct Support for Cert. & License Reqmt	Multi-purpose Facility	Future Cost Avoidance	No Cost Effective Alternatives Available	Improves Energy Efficiency	Total
Rogers Hall Dormitory Renovation	\$14.8	✓	✓		✓	✓	✓	✓	6
Cleveland Hall Dormitory Renov.	\$18.5	✓	✓		✓	✓	✓	✓	6
Delano Hall Renovation (Galley)	\$22.8	✓	✓		✓	✓	✓	✓	6
Mallory Pier Reconst. & Dredging	\$28.8	✓		✓					2
Academic Buildings Renovation	\$64.5	✓	✓	✓	✓	✓	✓	✓	7
Academic Technology Building	\$26.7		✓	✓	✓		✓		4
Bland Library Expansion	\$24.9		✓	✓	✓				3
Bridge Simulator (Replacement)	\$1.3			✓	✓		✓		3
LNG Simulator (Replacement)	\$3.6			✓	✓		✓		3
Steam Mach. & Gas Turbine Lab	\$2.9			✓		✓	✓		3
Dormitory Support Serv. Ren.	\$10.7	✓			✓	✓	✓		4
Lab. Software/Hardware Updates	\$0.4			✓	✓		✓		3
Eng. Lab. Addition to Fulton Hall	\$9.6			✓					1
Reconstruct. of Gibbs Lecture Hall	\$1.3		✓		✓				2
Emerg. Gen., Wiley Hall (COOP)	\$0.2	✓							1
Emerg. Gen., Yocum Ctr (COOP)	\$0.5	✓							1
Crowninshield Pier	\$6.9*	✓		✓			✓		3
Cressy Pier	\$7.6*	✓		✓			✓		3
Seawall Rehabilitation	\$2.9*					✓	✓		2
New Student Center	\$11.4		✓		✓				2
Physical Education Bldg (New)	\$42.7		✓	✓	✓		✓		4
Tug/Barge Simulator (New)	\$1.9			✓	✓		✓		3
Regimental Band Rm & Cer. Ctr	\$18.0		✓		✓				2