

**U.S. MERCHANT MARINE ACADEMY
(USMMA)**

**2023 THIRD REPORT TO THE
SECRETARY OF TRANSPORTATION**

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PREFACE

This report provides the U.S. Secretary of Transportation (Secretary) Pete Buttigieg with advice and counsel in accordance with the U.S. Merchant Marine Academy (USMMA or Academy) Advisory Board (Board) Charter. Pursuant to 46 U.S. Code of Regulations, Secretary Chao appointed members to the Board in June 2019.

As per 46 U.S. Code 51313, the Advisory Board is responsible for advising the Secretary of Transportation, the U.S. Department of Transportation/Maritime Administration, and the Superintendent of the U.S. Merchant Marine Academy on the course of academic instruction and management of the Academy. This report is a required report from the U.S. Merchant Marine Academy's Advisory Board to the Secretary of Transportation on the state and future status of the Academy and is the third annual report submitted to the Secretary by the Board.

Its primary purpose is to advise the Secretary, Maritime Administration (MARAD) Administrator, and Academy Superintendent on matters that need immediate and continued attention to advance the Academy toward meeting its strategic goals and objectives and to achieve its mission.

The findings in this report are based on direct inspections, meetings and observations made during the April 10-12, 2023 Board meeting at the Academy; several remote video conference (Zoom/Teams) meetings made by the Board with the Academy and with Government officials; individual visits by Board members to the Academy; oral reports and written documents provided to the Board by faculty and staff; survey data; and individual and small group discussions with Midshipmen, faculty, staff, administration, alumni, members of the maritime industry, and higher education officials. Recommendations are based on the Board members' collective knowledge of best practices and emerging trends and issues in higher education and the maritime industry, and on-Board members' expertise.

EXECUTIVE SUMMARY

The U.S. Merchant Marine Academy (USMMA) faces critical challenges related to **accreditation requirements, institutional governance, and infrastructure demands**. These challenges are interconnected and require immediate attention. Additionally, the Academy must address these challenges in the context of: **the shortage of qualified Strategic Sealift Officers (SSOs), the global merchant marine workforce shortage, and the post-COVID impacts on higher education institutions**.

The convergence of these threats and forces is particularly urgent as the Academy is set to undergo **multiple assessments in the next 24 months**. The retirement of the Provost further exacerbates the institutional leadership deficit. While progress has been made in some areas, persistent challenges hinder the Academy's ability to fulfill its mission effectively.

Accreditation-related challenges encompass several areas, including documenting the Assurance of Learning processes and lessons learned, and allocating adequate resources to critical support processes. The Academy should review and revise the academic schedule to address flexibility issues; it should also improve stakeholder engagement and communication processes. Strengthening the student information system, addressing incidents of sexual misconduct, and actively implementing Diversity, Equity, Inclusion and Belonging (DEIB) goals, are also crucial areas for improvement.

The inability of the U.S. Department of Transportation and the Maritime Administration to grant the Academy Superintendent the requisite authority in personnel hiring, financial planning and management, and procurement, is a critical failing and an accreditation concern that threatens the Academy's ability to exist as an independent and healthy institution of higher learning. Clear schedules, accountability, and performance benchmarks for strategic priorities should be articulated and communicated effectively. Improvements in planning, reporting, and analysis capabilities within the Student Information System, along with compliance with the Congressional mandate of hiring a Federal Construction Agent, are called for.

Infrastructure challenges call for the development of a comprehensive plan to address governance, physical, and fiscal infrastructure needs for accreditation. Adequate funding should be allocated for repairs and maintenance, prioritizing areas with the highest vulnerability. Investment in state-of-the-art technology infrastructure, including information technology and Wi-

Fi capabilities, is necessary to support educational, research, and national defense missions. Incorporating safe spaces for meetings to accommodate women and minority groups should be considered in new construction projects.

Addressing these challenges will require collaborative efforts and a commitment to proactive measures. By prioritizing the recommendations outlined in this paper, the USMMA can overcome its current obstacles, strengthen its institutional capacity, and better fulfill its mission in the future.

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INTRODUCTION

The U.S. Merchant Marine Academy is the nation's primary source for Strategic Sealift Officers, who provide the nation with secure maritime supply chain transportation in times of crisis and national emergency. The Academy's role as a sole source provider of Strategic Sealift Officers, and its critical role providing licensed merchant mariners and commissioned officers in the Armed Forces, places the Academy and its graduates in the center of the nation's national security, marine transportation, and economic missions.

The Board's 2022 annual report noted three existential threats to the Academy: accreditation requirements, institutional governance challenges, and infrastructure demands. The three threats are fundamentally interrelated: per Middle States accreditation requirements, an accredited institution must have clear and sufficient governing authority, a robust process that demonstrates continuous improvement, and adequate physical and technical infrastructure in support of its mission.

The Board notes significant progress in several areas over the past year (2022-2023) -in accreditation processes and infrastructure planning- even in the face of significant leadership change in the Department of Transportation's Maritime Administration (MARAD), in new administrative hires at MARAD in Washington, and in the new Critical Infrastructure and project management organization (PMO) at the Academy, and with a new Superintendent at the Academy. At the time of this report, the new Superintendent has been in her role for 7 months. Even in this short time period, the Academy, working with MARAD, has begun initial work or completion in more than half the 67 recommendations made in the NAPA report.

At the same time, the Advisory Board notes persistent significant challenges -in accreditation requirements, institutional governance and infrastructure- that impact the ability of the Academy to meet its mission. This report focuses on changes that have occurred at the Academy since the Advisory Board's last report in April 2022, and addresses progress on the challenges identified in the 2016 Middle States and 2021 NAPA reports, as well as observations from multiple meetings and conversations with Academy administration, staff, faculty, and midshipmen over the past year.

Three forces provide an imperative context for action regarding the Board's findings and recommendations:

1. the national shortage of qualified Strategic Sealift Officers (SSOs) to satisfy defense and industry needs, a need that the USMMA uniquely satisfies,
2. the global merchant marine workforce shortage, and
3. post-COVID impacts on higher educational institutions, faculty, and learners.

The SSO workforce shortage will significantly increase over the next decade as current mariners retire and the national pool of 18-to-22-year-olds shrinks and reaches a demographic 'cliff' in 2025. The global mariner workforce shortage has impacted all sectors of the marine transportation system, calling the system into crisis mode as ships, marine transportation systems and ports—and other employers—all vie for technology-savvy, licensed Academy graduates.

Student wellness and mental health are critical concerns in institutions of higher education post-COVID, as student learning at all educational institutions has been impacted by COVID learning and socialization deficits. **Academic and mental health support systems have been bolstered at the Academy, but there are still challenges in meeting midshipmen's learning, tutoring and academic support needs.** More tutors, training for tutors, and on-going training for ACE staff are needed.

Faculty overload, burnout and career exits are occurring at many higher education institutions, because of COVID impacts on students, faculty and institutional resources. Academy faculty are stretched thin across a tightly constrained curriculum, and faculty support requirements for student professional development, license, and military commissioning. Academy faculty regularly teach overload courses in trimesters to respond to curricular and midshipmen needs and faculty deployments. In the tightly constrained academic schedule, there is little room to accommodate disruptions in the academic schedule, or to engage in research. In short, the **Academy's academic schedule and extracurricular requirements do not provide students with a healthy learning environment, or faculty with sufficient time for research, license upgrade preparation, deployment schedule support, pedagogical improvement, or professional development activities, to the detriment of the Academy's academic reputation.**

These three forces are converging on the Academy at a critical time: the Academy will go through three rounds of assessment in the next 24 months: a Coast Guard STCW audit in Summer 2023, an ABET engineering re-accreditation review in September 2023, and a Middle States self-study and re-accreditation review in academic year 2024-2025, with a Middle States on-campus visit in Spring 2025. In addition, the last remaining member of the

Academy's institutional leadership over the past 3 years, the Provost, will be retiring summer 2023, leaving the Academy with a significant institutional memory and leadership deficit.

Each of these threats by itself would prove substantial. Given that these items were noted as critical insufficiencies in the 2016 Middle States review that resulted in the Academy being placed on accreditation warning (Middle States 2016a); the departure of the previous senior leadership team by June 2023 has only exacerbated the situation.

Thus, there is an unmistakable call for decisive action from the U.S. Merchant Marine Academy, MARAD, and the Secretary of Transportation. Three areas need immediate attention: (1) accreditation, (2) institutional governance, and (3) infrastructure. The imperative to address cultural improvement is equally acknowledged and intertwined in accreditation and infrastructure. These key areas demand immediate focus and concerted efforts to safeguard the Academy's future and ensure its continued excellence. This report focuses on these areas of importance for meeting the Academy's mission, set in the context for immediate action required by the contextual forces shaping the global maritime industry and U.S. national defense needs.

This report provides background and recommendations for the work of the U.S. Merchant Marine Academy Advisory Council, constituted in response to the November 2021 National Academy of Public Administration report (NAPA, 2021), and announced on May 10, 2023.

ACCREDITATION

Accreditation by regional bodies is the minimum essential quality standard for learning organizations in the United States. Accreditation activities demonstrate educational effectiveness and continuous process improvement, including an assurance of learning, effective governance and institutional planning, analysis, and reporting.

The Academy is accredited by the Middle States Commission on Higher Education (MSCHE); it received re-accreditation in 2017, after being placed on warning in 2016 because of insufficient evidence that the institution was in compliance with: Requirement of Affiliation 7 (Institutional Planning), Standard 2 (Planning, Resources, and Institutional Renewal), Standard 3 (Institutional Resources), Standard 4 (Leadership and Governance), Standard 5 (Administration), and Standard 9 (Student Support Services) (Middle States, 2016b). The Academy was removed from warning in

November 2017, after demonstrating adequate progress on these items. However, the items may become a basis for future accreditation scrutiny.

Mission Capability

The Board's review of the Academy's programs, curricula, plans, and activities shows them to be in the process of being updated and aligned to accomplish the Academy Mission. The academic curriculum has been rewritten to reflect current industry trends and 9 concentrations have been identified, but not yet fully implemented into the curriculum.

However, support processes that are critical to the Academy's mission are significantly under-resourced and of low priority. *Admissions processes* that support the development of the SSO pipeline lag processes at other federal and state service academies, do not adequately track with NCAA recruiting cycles, and do not effectively leverage prep schools. Strikingly, there is *little capacity to increase student enrollment* in response to defense or industry needs. In addition, *the academic, physical, human capital, technology, and connectivity infrastructure* to support increasingly technical industry and SSO needs (autonomous and semi-autonomous vessels and operations, AI and machine learning, offshore wind technology, cybersecurity, interoperable defense service operations) is under resourced and not sufficiently planned.

Finally, the academic curriculum is hampered by an inflexible and overly constrained academic schedule, which limits midshipmen's ability to pursue internships, minors, certifications, or dual majors, even if those opportunities have been identified. Certificates and micro credentials, which could provide professional certification opportunities for midshipmen, and which could provide some relief in the tight academic schedules, have not been fully explored.

Faculty Sufficiency

The tight academic schedule also impacts faculty sufficiency, an important concern of accreditation bodies. Because of the constrained schedule, faculty have limited opportunities to pursue research, professional development and improved pedagogy, all requirements for an accredited higher educational institution. The tight schedule, combined with the Academy's slow hiring processes, makes hiring new faculty members to cover gaps as faculty retire and/or deploy almost impossible to achieve in a timely manner. The resulting faculty course overloads, without the possibility of new hires or relief in the academic schedule, compound the difficulty in hiring quality faculty. Critical faculty hiring needs have been identified but have not been filled in a timely fashion; delays in faculty

hiring result in faculty overload, leading to questions about faculty sufficiency, a topic of interest to accreditation bodies.

Assurance of Learning (AoL)

The core mission of the Academy is educating the next generation of future maritime leaders. Central to educational competence is demonstration to accrediting organizations that academic processes are assessed on a routine basis, learning is underway, learning outcomes are measurable and part of the institution's continuous process improvement efforts, and lessons learned and recommendations from the assurance of learning (AoL) processes are articulated, shared and assessed.

As part of the Academy's AoL processes, its Institutional, Program & Course Level Objectives have been identified and two rounds of AoL assessment are underway. Student peer tutoring, mentoring and Sea Year pairing processes have been introduced, and are funded and are being assessed.

However, it is not clear that recommendations stemming from AoL processes are captured, measured and assessed regularly. Student peer tutoring, mentoring and Sea Year pairing processes have also been introduced, are funded and are being assessed.

To support these efforts, the ongoing **student information system acquisition and installation processes, currently focused on transitioning Registrar data, must also be accelerated** so that an adequate AoL data repository and analytical capability can be developed to support AoL assessment, which is currently a manual process. These activities are required immediately and are essential inputs to a successful accreditation visit.

Stakeholder Engagement, Communication

Key to success in an accredited higher educational institution are effective stakeholder engagement and communication processes. **Both stakeholder engagement and communication processes need attention before the Middle States visit.**

The Academy has made progress to engage stakeholders so that the academic curriculum reflects student, industry and stakeholder needs and expectations. Stakeholder engagement with faculty, students, the USMMA Parents Club, alumni and others was an important input to the development of the well-resourced Academic Center of Excellence (ACE), which responds to post-COVID learning gaps. Stakeholders have also been engaged in the development of the

Academic Strategic Plan for 2024-2029, which is under development, and is being socialized and reviewed by Academy constituents. The Maritime TV group and the Kings Point Class of 1969 alumni have developed monthly industry-relevant training for midshipmen.

To extend these efforts and institutionalize stakeholder input to academic processes, **the Provost and Academic Departments should leverage Advisory Boards to provide curricular and program review, content, partnerships, and industry pathways for midshipmen.**

Communication processes at the Academy are fragmented and disjointed, under resourced and currently without leadership. The departure of the last Superintendent, and with him, a Communications Officer, has left a significant deficit. Communication between MARAD and the Academy appears incomplete, and dependent on personal relationships, rather than effective institutional communication practice or policies. This dampens the effectiveness of new administrative hires, policies, and programs, which can be trapped by antiquated communication modes and practices, and historical feuds. Academic communication processes lack standard processes, accountability, or performance metrics, responding to current events, but not anticipatory of future needs or vulnerabilities. Academy constituents expressed frustration with breakdowns in communication, particularly around key strategic programs such as critical infrastructure planning, academic hires, administrative priorities, and funding decisions.

The Academy's communication processes are inadequate, and cannot support professional technology and communication requirements, including hosting a remote or hybrid professional meeting without interruption and/or significant IT support. Government, regulatory, stakeholder, and academic expectations for reliable, consistent, and effective communication capabilities and processes are heightened in the post-COVID era, given the wide proliferation of and experience with on-line collaboration and communication platforms and technologies. **Academy communication and IT systems are not adequate to support a thriving academic enterprise with a global mission, and worldwide connections, resources and partners, a critical need to achieve the Academy's mission, and a concern for accreditation.**

Culture, Including Sexual Misconduct & DEIB

The Advisory Board's recommendations from 2021 regarding Sea Year and vessel operators have been integrated as key components of the EMBARC program and the National Defense Authorization Act (NDAA) of 2022. **Notably, the Academy has made significant progress in staffing the Sexual**

Assault Prevention and Response Office (SAPRO) with trained professionals equipped to handle incidents of sexual misconduct on campus and at sea.

Establishing trust between SAPRO representatives and midshipmen will be a gradual process that demands dedicated time and effort. **Regrettably, changes to the SAPRO in addition to news of controversial tweets has sparked apprehension in the reporting process.** Consequently, it is possible that fewer reports may be made to the SAPRO.

Therefore, it is of utmost importance to collect data that effectively captures the progress and impact of the Academy's Sexual Assault Prevention and Response (SAPR) program. This comprehensive assessment will ensure that the changes implemented within the SAPRO are genuinely effective and capable of addressing the issues at hand.

Beyond the scope of this report, it is evident that more action is necessary to enhance the overall culture at the Academy. These improvements are not exclusive to the U.S. Merchant Marine Academy; a recent Cultural Competence study conducted by NAPA at the U.S. Coast Guard Academy identified similar cultural concerns (NAPA, 2022). Similar calls for enhanced sexual misconduct policies, procedures, and cultural improvements have also been raised at state maritime academies, as highlighted in reports from Cal Maritime News (2021) and SUNY Maritime College (2022).

To address existing Diversity, Equity, Inclusion and Belonging (DEIB) gaps, goals, and plans, the Academy is to undergo a comprehensive study. **It is imperative that DEIB goals and plans are developed, clearly articulated, and widely shared across the Academy.** Furthermore, efforts should focus on achieving a broader and more diverse representation of marginalized groups within the Regiment of Midshipmen, with a specific emphasis on gender and people of color.

It is important that spaces exist on campus for minorities and women to promote diversity, foster a sense of belonging, encourage networking and mentorship, address unique challenges, and celebrate achievements. This is further explained in this report in the Infrastructure section.

To promote a culture of diversity, equity, inclusion and belonging (DEIB) at the Academy, **training programs should be developed and implemented for faculty and staff.** This training should prioritize **inclusive language and communication** for fostering a respectful environment. It should also cover a range of essential topics, including but not limited to: *understanding unconscious bias; recognizing and addressing discrimination and harassment; and allyship and advocacy.* By

implementing comprehensive DEIB training that covers these key areas, the Academy can ensure that faculty and staff have the necessary knowledge and skills to actively contribute to a campus culture that values diversity, equity, and inclusion.

INSTITUTIONAL GOVERNANCE

The Academy’s governance structure, a concern noted in the 2016 Middle States report and in the 2021 NAPA report, is a patchwork quilt of authorities, responsibilities, and oversight. The Academy receives oversight and advice from three bodies, the Congressional Board of Visitors (BOV); the Academy’s Advisory Board, whose statutory responsibilities include the Academy’s academic mission; and the Maritime Education and Training Executive Review Board (METERB), a board of senior executive service personnel based in MARAD Headquarters in Washington. In addition, a new oversight and review board, the U.S. Merchant Marine Academy Advisory Council, constituted in response to the November 2021 National Academy of Public Administration report (NAPA, 2021), was announced on May 10, 2023. All of these groups provide input and suggestions to the Academy Superintendent, MARAD, and to the Secretary of Transportation.

In July 2021, the U.S. Department of Transportation’s Office of the Inspector General found this structure unworkable and recommended that, *‘[g]iven [the] various existing oversight bodies supporting the U.S. Merchant Marine Academy, the Maritime Administration should reconsider whether the Maritime Education and Training Executive Review Board is needed. Having too many oversight bodies can confuse lines of authority and can short circuit effective leadership in the U.S. Merchant Marine Academy’ (U.S. Department of Transportation, 2021).*

These thoughts were also echoed in the November 2021 NAPA report, which noted that **the Academy’s advisory structure provides the appearance of oversight, but in actuality does not provide appropriate guidance.** Part of this shortfall relates to the capabilities and experience of the Board. Members of the different groups lack domain and educational experience as well as advisory authority. Congressional BOV members are Congressional representatives and staffers with some industry participation; the Academy Advisory Board members include senior industry, educational and stakeholder representatives. METERB members provide knowledge of MARAD and DOT processes and activities, but they do not presently have any current educational or industry leaders. Stakeholders groups such as the Kings Point Parents Club, the USMMA Alumni Foundation, and Kings Point alumni groups around the world provide important input to the Academy and MARAD, with varying degrees of effectiveness. The multiple, and in some cases overlapping, advisory groups are

inefficient and do not provide comprehensive oversight or review of Academy processes or programs. At a minimum, there should be a natural synergy between the Academy Advisory Board and the METERB. METERB members are accomplished government experts; the Academy Advisory Board can benefit from this expertise, and the METERB could benefit from the Advisory Board's current industry, academic and stakeholder expertise. A first step in moving in this direction is to have each group invite one or more members of the other group to their meetings as a non-voting member. **The Academy's advisory processes and structures are in need of review and synchronization so that timely, efficient and insightful guidance and recommendations can be provided to the U.S. Department of Transportation, MARAD, and to the Academy.**

Decision Rights Clarification for the Superintendent

In 2016, Middle States noted that:

“The Superintendent must have the means, authority, and responsibility, assigned or delegated from DOT and/or MARAD as appropriate, over the institutional functions of personnel hiring, financial planning and management, and procurement required to effectively and efficiently accomplish the Academy's mission. “

The U.S. Department of Transportation Inspector General's report (2021) noted that problems persisted with respect to the Superintendent's authority and recommended that the Maritime Administration examine the appropriate division of decision-making and authorities of the U.S. Merchant Marine Academy's management between the Superintendent and MARAD. Although the Superintendent's authority differs from those of traditional institutions of higher education, the Advisory Board notes that clear lines of authority and responsibility are articulated at the nation's other federal services academies, as well as at the state Maritime Academies. **The inability of the U.S. Department of Transportation and the Maritime Administration to grant the Academy Superintendent the requisite authority in personnel hiring, financial planning and management, infrastructure planning and procurement, is a critical failing and an accreditation concern that threatens the Academy's ability to exist as an independent and healthy institution of higher learning.**

Budget planning and execution authority, as well as adequate financial resources, are key to effective institutional leadership. As noted in the 2021 NAPA report, the Academy does not receive financial support that is similar to that provided to the other federal service academies:

“The perceived unequal footing between USMMA and the other federal service academies crosses several areas, most notably arrangements for faculty, facilities decision making, and the discretionary use of funds.” (Page 189) Most notably, the Superintendent has no discretionary or representational budget, resulting in morale and welfare expenditures coming from personal funds, a financial control risk and vulnerability.

Limits to the Superintendent’s authority also stretch to partnerships and opportunities to enhance midshipmen learning, including leveraging industry knowledge, expertise and resources in and out of the classroom, aside from funding. The Superintendent’s ability to engage alumni, external organizations and the maritime industry is highly curtailed and limits the effectiveness of student learning opportunities. **In short, the Board sees no clarification or improvement with respect to the Superintendent’s decision rights and authority, which are inadequate; clarification and improvement of these rights is a governance requirement that impacts the Academy’s accreditation.**

Institutional Planning, Analysis and Reporting

Planning, analysis, and reporting capabilities are essential for effective education, leadership development and governance in educational institutions. Central to these capabilities are the technology and human processes required to support effective decision making with analytics and information. The 2021 NAPA report highlighted the Academy’s lack of strategic vision and infrastructure for providing that vision.

The Academy must have robust and improved Strategic Planning processes and products, engaging stakeholders, incorporating their input, benchmarking performance against articulated metrics, and demonstrating continuous process improvement and learning over time. **The Academy has developed a 5-year Strategic Plan that identifies strategic priorities, metrics and performance benchmarks. The Strategic Plan is being aligned with the Critical Infrastructure Plan (CIP), and priorities for the CIP are being developed. However, schedules, accountability and performance benchmarks for the strategic priorities have not been articulated and communicated across the Academy.**

To support its institutional planning, analysis and reporting efforts, the Academy is in the process of installing a Student Information System (SIS), a common repository for student records, including registration, grades, financial and outcomes assessment information. The first phase of the SIS

project will migrate the current student record system to the SIS. Financial and outcomes assessment data, including institutional learning objective (ILO) and programmatic learning outcome reporting, analysis and report dissemination, are scheduled for later phases of the SIS project. As a result, the SIS repository and institutional learning capabilities will not be available to support Middle States accreditation analysis and reporting in 2023-2024. This gap was identified in the 2021 NAPA report as well as in the previous Middle States visit.

The Academy is also supported by an on-premises data center that houses the Academy's Blackboard Learning Management System and simulator systems. The on-premises data center is on the critical path of the Samuels Hall renovation. The data center that powers the ancient shell of the simulation building is serviced by a single trunk vulnerable land-based data link that is subject to possible interruption from vehicle-light pole accidents.

The vulnerability and currency of the Academy's data and network architecture and systems, which are central to the Academy's ability to deliver on its educational and professional development training missions, are concerning. To address this critical information, analysis and reporting need, **DOT/MARAD and the Academy must accelerate the planning, reporting and analysis capabilities represented in the Student Information System and immediately review the Academy's data, network and enterprise architecture choices.** The results of the review, and the Academy's information systems enterprise, must position the Academy for educational excellence, and provide the midshipmen with improved, in-demand maritime specialization and educational programs such as cybersecurity; autonomous vessel, port and engineering operations; artificial intelligence and machine learning; hybrid, green and emerging energy systems; maritime-commercial space operations; brown water, offshore and renewable energy operations and services; and interoperable commercial shipping, defense and transportation systems.

INFRASTRUCTURE

A qualified Capital Improvement Program (CIP) Manager has been hired, with three additional managers to follow. The recent MARAD/USMMA CIP Annual Report describes an action plan for dealing with six Near-Term Active Projects. A five-year CIP has been developed, and bids have gone out. All the people involved with this action plan should be commended. While this achievement is recognized, it is important to reiterate that the fiscal 2022 NDAA mandated that MARAD hire a Federal Construction Agent (FCA) by March 23, 2023, to develop a plan to execute the Academy's infrastructure modernization. That deadline has now passed without action, and we understand that

MARAD intends to manage the project. **The Advisory Board strongly suggests that MARAD comply with the Congressional mandate of hiring an FCA.**

Nevertheless, the Academy physical infrastructure is crumbling and is not being repaired or maintained at a rate that addresses infrastructure vulnerability. The limited funds for new hires across the Academy induce tradeoffs and perceived inequities between CIP managers and faculty hires.

This CIP report is serving as a substitute for an Academy Master Plan. The report calls for \$21 million to renovate the Fulton/Gibbs Complex, followed by \$100 million for the Replacement of the Fulton/Gibbs Complex. This sequence will result in the creation of swing space on campus, although the allocation of the swing space has not been articulated. Additional work is required to develop a framework for long-range planning of new construction projects, beyond what appears in the Long-Term Active Projects section of the CIP Report.

Information Technology

Information systems and information technology (IT) are core infrastructure requirements for effective academic institutions. The Academy is in the midst of an IT upgrade process focused on improved academic technology, a student and registrar information system upgrade, and a review of the Sea Year processes. These needed improvements are years behind schedule and proceeding at a glacial pace, behind other infrastructure priorities on campus. The nation's maritime future depends on a technically literate, educated mariner who is equipped to deal with the global proliferation of current and advanced technology throughout the maritime and business world.

The nation's premier maritime educational and research institution deserves a state-of-the-art technology infrastructure to capture, track, monitor, report and forecast student, academic, administrative, and financial information in support of the Academy's educational, research and national defense missions. Midshipmen need access to state-of-the-art information technology, networks, simulators, models, data sets, and artificial intelligence and cybersecurity resources, to be fully prepared for leadership and service in a digital maritime and national defense world. Academy faculty and research support personnel need access to premier electronic and analog journals, simulations, models, data sets and research technology in support of on-going professional development and the advancement of knowledge, consistent with the Academy's missions. Academy archives of maritime studies, simulations, data sets and information are priceless repositories of

irreplaceable value that should be protected and preserved for the benefit of the nation and the world's maritime education and research community.

The Academy is leveraging current learning management system technology, largely accelerated by remote learning during COVID. The Blackboard Learning Management System is widely used across the Academy to support the academic mission. The Blackboard Learning Management System is now used by approximately 60% of all faculty in courses. Faculty are encouraged to use Blackboard to post assignments, provide learning materials and exercises, and to track student progress. Midshipmen expect real-time and remote access to grades, assignments and learning materials using the learning management system.

A Student Information System (SIS) is planned for academic year (AY) 2024-2025, including class registration and assessment functionality. This long planned and slowly executed capability provides an essential reporting capability for the Middle States accreditation visit in AY 2024-2025.

A Digital Plan for Sea Year projects and processes, including security requirements and integration with the Academy's Learning Management System and Student Information System, has not been developed. Security requirements for safe and effective delivery of company-, trade- and military-sensitive information contained in Sea Year Projects have not been adequately articulated, resourced or implemented. Faculty grading Sea Year Projects and midshipmen completing Sea Year Projects should be utilizing digital products, networks, submissions, and tracking, including integration with the Blackboard Learning Management System and the Student Information System.

Human Capital Infrastructure

The Academy's attention to human capital infrastructure is improving, particularly as new hires join the Academy. However, significant investment in human capital planning, acquisition and outreach, recruiting, and retention is required. The Academy needs significant improvement in its use of and attention to industry and human resources best practices and policies. Hiring faculty and staff in a timely manner is a perennial problem at the Academy, which is hampered by the requirement to utilize *USAJobs.com*, a federal job posting site that is cumbersome and does not align smoothly with the academic hiring cycle. As mentioned earlier, these delays in faculty hiring have detrimental effects on student learning outcomes, faculty staffing levels, and the Academy's ability to fulfill its mission requirements. Interestingly, the 2021 NAPA report highlights that the U.S. Coast Guard Academy obtained an exemption from the mandatory use of *USAJobs.com* for job postings. This

exemption presents an opportunity to address the deficiencies and delays in faculty hiring that directly impact the Academy's mission requirements.

Spaces for Minorities and Women

Including spaces on campus for minorities and women at the Academy is important to promote diversity, foster a sense of belonging, encourage networking and mentorship, address unique challenges, and celebrate achievements. **Creating designated spaces sends a clear message that diversity and inclusion are valued at the institution by demonstrating a commitment to providing an environment where individuals from all backgrounds, including minorities and women, feel welcome, supported, and represented.**

Dedicated spaces for women and minorities at the Academy can also serve as a hub for networking opportunities and mentorship programs. The spaces can facilitate connections with alumni, professionals, and organizations in related fields, **providing valuable resources, guidance, and career development opportunities.**

The spaces would also enrich the wider Academy community, by serving as a platform for celebrating the achievements and contributions of minorities and women within the maritime industry and beyond. By showcasing success stories, hosting events, and highlighting diverse perspectives, the Academy would promote awareness and understanding of women and minorities' accomplishments.

Overall, the inclusion of spaces on campus for minorities and women at the Academy is essential for fostering a more inclusive and equitable learning environment, supporting the diverse needs of midshipmen, and preparing midshipmen for successful careers in the maritime industry. The Advisory Board is pleased to point out that the Academy has set aside meeting spaces for student affinity groups in some existing buildings.

CONCLUSIONS

The Advisory Board's conclusions highlight the critical challenges faced by the U.S. Merchant Marine Academy, encompassing accreditation requirements, institutional governance issues, and infrastructure demands. These challenges are interconnected and require immediate attention. Additionally, three significant forces further emphasize the need for action: the national shortage of qualified Strategic Sealift Officers (SSOs), the global merchant marine workforce shortage, and the

post-COVID impacts on higher education institutions. The convergence of these threats and forces is particularly pressing as the Academy is set to undergo multiple assessments in the next 24 months. Furthermore, the retirement of the Provost exacerbates the institutional leadership deficit. While progress has been made in some areas, persistent challenges persist in accreditation requirements, institutional governance, and infrastructure, hindering the Academy's ability to fulfill its mission effectively.

Accreditation Conclusions

1. Academy accreditation and infrastructure planning processes have made significant progress over the past year (2022-2023). However, the Academy still faces significant persistent challenges in accreditation, institutional governance and infrastructure requirements, all of which impact the ability of the Academy to meet its mission.
2. The Academy's Assurance of Learning (AoL) activities are in process; its Institutional, Program & Course Level Objectives have been identified and two rounds of AoL assessment are underway. Student peer tutoring, mentoring and Sea Year pairing processes have been introduced, are funded and are being assessed.
3. The Academy still needs to complete its accreditation 'closing the loop' processes, documenting lessons learned, and developing its AOL process recommendations.
4. The Academy's academic curriculum has been rewritten and nine concentrations have been identified, but not yet fully implemented, into the curriculum.
5. Academic support processes that are critical to the Academy's mission, including admissions and enrollment, and the academic, technology, and connectivity infrastructure to support an increasingly technical maritime industry and SSO needs, are significantly under-resourced and of low priority.
6. The Academy's tightly constrained academic schedule impacts student learning and faculty sufficiency, an accreditation concern. The tight schedule does not provide a healthy student learning environment, and limits the ability of midshipmen to pursue education in the form of academic minors, and professional development training, including minors, certifications and microcredentials. The schedule impacts faculty sufficiency by limiting time for faculty research, professional development, license upgrade preparation, deployment coverage, and pedagogical renewal opportunities, to the detriment of the Academy's academic reputation.

7. The Academy's information technology and connectivity is inadequate, lags that of other federal and state maritime academies, and is insufficient to support administrative and academic needs. The Academy's inadequate information technology and connectivity capabilities limit student learning, both on campus and during Sea Year, when digital deliverables should be more widely supported. It also limits the Academy's role as an academic or research convener or conference host, and its role as a premier maritime simulation, education and research center.
8. The Academy's Student Information System acquisition and installation processes, currently focused on transitioning Registrar data, are not sufficient to support accreditation requirements.
9. The Academy still struggles with .gov and .edu conflicts, which limit technology procurement and midshipmen support, and infrastructure and technology cost savings.
10. The Academy's IT academic and administrative support is under resourced and its instructional design staff are not sufficient to support the faculty, midshipmen, and administration, and the Academy's mission. Perhaps because of limited staff and resources, IT processes and Academic technology development projects involve limited consultation and often do not reflect stakeholder input.
11. The Academy has made progress to engage stakeholders so that the academic curriculum reflects student, industry and stakeholder needs and expectations.
12. The Academy's communication and IT processes are inadequate, and cannot support professional technology and communication requirements, including hosting a remote or hybrid professional meeting without interruption and/or significant IT support. Academy communication and IT systems are not adequate to support a thriving academic enterprise with a global mission, and worldwide connections, resources and partners, a critical need to achieve the Academy's mission, and a concern for accreditation.

Culture Conclusions

1. The Academy has made significant progress in staffing the Sexual Assault Prevention and Response Office (SAPRO) with trained professionals equipped to handle incidents of sexual misconduct on campus and at sea.
2. Establishing trust between SAPRO representatives and midshipmen will be a gradual process that demands dedicated time and effort.

3. Despite the swift and visible response to sexual assault and sexual harassment (SASH) events at sea and at the Academy, more action is needed to improve the culture at the Academy.
4. Diversity, Equity, Inclusion and Belonging (DEIB) goals and plans have been developed, articulated and shared across the Academy but much still needs to be done. Minorities and women need dedicated spaces. Embracing diversity and inclusion not only benefits those directly involved but also contributes to the overall growth, progress, and success of the Academy community as a whole.
5. The tightly constrained academic schedule impacts student learning and mental health, and impacts faculty sufficiency and workload, limiting faculty research, professional development, license upgrade preparation, deployment schedule coverage, and pedagogical improvement opportunities.
6. Academic and mental health support systems have been bolstered at the Academy, but challenges still exist in meeting midshipmen learning, tutoring and academic support needs.
7. The Academy does not currently mandate DEIB computer-based training for faculty and staff to ensure they have the necessary knowledge and skills to actively contribute to a campus culture that values diversity, equity, inclusion and belonging.

Institutional Governance Conclusions

1. Despite the advances in Academy accreditation and infrastructure planning processes that have occurred over the past year (2022-2023), the Academy may not have the governance processes to be accredited.
2. The inability of the U.S. Department of Transportation and the Maritime Administration to grant the Academy Superintendent the requisite authority in personnel hiring, financial planning and management, and procurement, is a critical failing and an accreditation concern that threatens the Academy's ability to exist as an independent and healthy institution of higher learning.
3. The Superintendent has no discretionary or representational budget, resulting in morale and welfare expenditures coming from personal funds, a financial control risk and vulnerability.
4. The Academy has developed a 5-year Strategic Plan that identifies strategic priorities, metrics and performance benchmarks. The Strategic Plan is being aligned with the Critical Infrastructure Plan (CIP), and priorities for the CIP are being developed. However, schedules, accountability and performance benchmarks for the strategic priorities have not been articulated and communicated across the Academy.

5. The Academy's Advisory processes and structures are in need of review and synchronization so that timely, efficient and insightful guidance and recommendations can be provided to the Department of Transportation, MARAD, and to the Academy. The multiple, and in some cases overlapping, Academy advisory groups are inefficient and do not provide comprehensive oversight or review of Academy processes or programs.
6. The vulnerability and currency of the Academy's data and network architecture and systems, which are central to the Academy's ability to deliver on its educational and professional development training missions, are concerning. Critical technology needs include academic and professional development support for faculty, staff and midshipmen in cybersecurity; autonomous vessel, port and engineering operations; artificial intelligence and machine learning; hybrid, green and emerging energy systems; maritime-commercial space operations; brown water, offshore and renewable energy operations and services; and interoperable commercial shipping, defense and transportation systems.
7. The planning, reporting and analysis capabilities in the Student Information System are not adequate to support governance, education and administration at the Academy.

Infrastructure Conclusions

1. Academy infrastructure planning processes have made significant progress over the past year (2022-2023). A qualified Critical Infrastructure Program (CIP) Manager has been hired, with three additional managers to follow. The recent MARAD/USMMA CIP Annual Report describes an action plan for dealing with six Near-Term Active Projects. A five-year CIP has been developed, and bids have been issued.
2. Despite this progress, the Academy's physical infrastructure is still crumbling and is not being repaired or maintained at a rate that addresses infrastructure vulnerability. The limited funds for new hires across the Academy induce tradeoffs and perceived inequities between CIP managers and faculty hires.
3. The Academy has not met the requirements of the FY 2022 National Defense Authorization Act (NDAA), which mandated that MARAD hire a federal construction agent (FCA) by March 23, 2023, to develop a plan to execute the Academy's infrastructure modernization. MARAD has indicated that they will manage the project.
4. The CIP report identified that swing space will be created on campus, although the allocation of the swing space has not been articulated.

5. Additional work is required to develop a framework for long-range planning for new construction projects, much more than what appears in the Long-Term Active Projects section of the CIP Report.
6. The nation's premier maritime educational and research institution deserves a state-of-the-art technology infrastructure to capture, track, monitor, report and forecast student, academic, administrative and financial information in support of the Academy's educational, research and national defense missions.
7. The Academy's attention to human capital infrastructure is improving. However, significant investment in human capital planning, talent acquisition and outreach, recruiting, and retention is required. The Academy needs significant improvement in its use of and attention to industry and human resources best practices and policies.
8. Hiring faculty and staff in a timely manner is a perennial problem at the Academy, which is hampered by the requirement to utilize USAJobs.com, a federal job posting site that is cumbersome and does not align with the academic hiring cycle.

RECOMMENDATIONS

The following recommendations are proposed to address the critical challenges faced by the U.S. Merchant Marine Academy. These recommendations are categorized into areas of accreditation, institutional governance, infrastructure, and culture improvement. By implementing these recommendations, the Academy can strengthen its compliance with accreditation requirements, enhance governance effectiveness, address infrastructure demands, and foster a more inclusive and supportive culture. Each recommendation begins with "The Academy (or MARAD, or the Department of Transportation) should,..." indicating the proactive steps that identified parties must take to address and resolve the identified issues.

Accreditation Recommendations

1. The Academy should complete its Assurance of Learning (AoL) processes by documenting its AoL lessons learned and developing AOL process recommendations.
2. The Academy should allocate adequate resources and prioritize critical academic support processes to ensure compliance with accreditation requirements.
3. The Academy should review and revise the academic schedule to provide more flexibility and address constraints that impact student learning and faculty sufficiency.

4. The Academy should improve stakeholder engagement and communication processes to foster transparency and collaboration, and improve academic and administrative processes.
5. The Academy should strengthen the capabilities of, and accelerate the schedule for, the student information system implementation to effectively support accreditation requirements.
6. The Provost and the Academic Departments should leverage academic Advisory Boards to provide curricular and program review, partnerships, and industry pathways for midshipmen.
7. The Academy should comply with the Congressional mandate by hiring a Federal Construction Agent (FCA) to ensure adherence to regulatory requirements and accreditation standards.

Culture Recommendations

1. The Academy should continue efforts to address and respond to incidents of sexual assault and sexual harassment (SASH), ensuring a swift and visible response.
2. The Academy should implement and actively pursue Diversity, Equity, Inclusion and Belonging (DEIB) goals and plans.
3. The Academy should capture, analyze and report on an annual basis information about the progress and impact of the Academy's Sexual Assault Prevention and Response (SAPRO) program. This comprehensive assessment will ensure that the changes implemented within the SAPRO are genuinely effective and capable of addressing the issues at hand.
4. The Academy should strengthen academic and mental health support systems to better meet midshipmen's learning, tutoring, and academic support needs. The Academy should also provide spaces for meetings of women and minorities on campus.
5. The Academy should revise the academic schedule and extracurricular requirements to provide students with a healthy learning environment, and faculty with sufficient time for research, license preparation upgrade, deployment schedule support, professional development and pedagogical improvement activities.
6. The Academy should institute and require computer-based training for faculty and staff to ensure they have the necessary knowledge and skills to actively contribute to a campus culture that values diversity, equity, inclusion and belonging.

Institutional Governance Recommendations

1. The Department of Transportation and MARAD should grant the Academy Superintendent the necessary authority in personnel hiring, financial planning and management, and procurement to ensure effective governance.
2. The Department of Transportation and MARAD should grant the Superintendent an adequate discretionary or representational budget, commensurate with that of other academies, for morale and welfare expenditures.
3. The multiple, and in some cases overlapping, Academy advisory groups should be re-aligned and synchronized. At a minimum, the natural synergy between the Academy Advisory Board and the METERB should result in joint meetings, beginning with each group inviting one or more members of the other group to their meetings as a non-voting member.
4. The Academy should establish clear schedules, accountability, and performance benchmarks for strategic priorities outlined in the Academy's Strategic Plan.
5. The Department of Transportation, MARAD and the Academy should accelerate the planning, reporting and analysis capabilities in the Student Information System and immediately review the Academy's data, network, and enterprise architecture choices. The results of the review, and the Academy's information systems enterprise, must position the Academy for educational excellence, and provide the midshipmen with improved, in-demand maritime specialization and educational programs such as cybersecurity; autonomous vessel, port and engineering operations; artificial intelligence and machine learning; hybrid, green and emerging energy systems; maritime-commercial space operations; brown water, offshore and renewable energy operations and services; and interoperable commercial shipping, defense and transportation systems.
6. MARAD and the Academy must comply with the Congressional mandate of hiring an FCA, reinforcing institutional governance and regulatory compliance.

Infrastructure Recommendations

1. The Academy should develop a comprehensive plan to address the governance, physical, and fiscal infrastructure needs of the Academy to meet accreditation standards.
2. The Academy should allocate sufficient funds for the repair and maintenance of the Academy's physical infrastructure, prioritizing areas with the highest vulnerability.

3. The Academy should articulate plans for swing space on campus, and develop a framework for long-range planning for new construction projects, beyond that in the Long-Term Active Projects section of the CIP Report.
4. The Academy should invest in state-of-the-art technology infrastructure to capture, track, monitor, report, and forecast student, academic, administrative, and financial information.
5. The Academy should improve its human capital infrastructure processes, including talent acquisition and outreach, recruiting and retention, developing processes and programs aligned with human resources and industry best practices.
6. The Academy should ensure that new construction projects prioritize the inclusion of safe spaces for meetings of women and minority groups.

By embracing the recommendations provided, the U.S. Merchant Marine Academy can effectively confront its critical challenges, fortify its operations, and secure its ongoing success in fulfilling its core purpose of delivering top-tier maritime education and cultivating future industry leaders. The highlighted challenges, which present substantial risks to the Academy's mission, must be promptly addressed, given the convergence of external factors and impending assessments that will shape the institution's trajectory. It is possible for the Academy to proactively surmount its obstacles, bolster its accreditation status, enhance institutional governance, refine its infrastructure, and cultivate an inclusive and supportive environment. Seizing this opportunity for decisive action will not only protect the Academy's autonomy and standing but also ensure its unwavering commitment to meeting the nation's strategic sealift and maritime workforce requirements.

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