MORGAN STATE UNIVERSITY
GROWING THE FUTURE • LEADING THE WORLD

Provost and Senior Vice President for Academic Affairs

November 7, 2019

The Honorable Dr. James D. Fielder, Jr.
Maryland Higher Education Commission
6 N. Liberty Street, 10th Floor
Baltimore, MD 21201

Dear Dr. Fielder,

The purpose of this letter is to request your review and approval of the Substantial Change to a Degree Program for the Master of Science degree in Construction Management.

The Master of Science in Construction Management program at Morgan State University is a 42-credit hours program that was approved by MHEC on December 15, 2010. This proposal is to modify the requirements of the MHEC-approved degree from 42 credit hours to 30 credit hours. The purpose of the MS degree is to educate and train industry leaders, so they understand the complexities in construction projects and are able to enhance their skills in managing human and other resources in construction projects.

Please keep us informed as to the review process. If you need any additional information, please do not hesitate to contact me via lesia.young@morgan.edu or (443) 885-3350.

Sincerely,

Dr. Lesia Crumpton-Young
Provost and Senior Vice President for Academic Affairs

CC: Dr. David Wilson, President
Dr. Farzad Moazzami, Interim Assistant Vice President for Academic Affairs
Dr. Maryanne Akers, Dean, School of Architecture and Planning
Dr. Emily Dow, Assistant Secretary for Academic Affairs, Maryland Higher Education Commission

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Cover Sheet for In-State Institutions
New Program or Substantial Modification to Existing Program

Institution Submitting Proposal	Morgan State University

Each action below requires a separate proposal and cover sheet.

- ○ New Academic Program
- ○ New Area of Concentration
- ○ New Degree Level Approval
- ○ New Stand-Alone Certificate
- ○ Off Campus Program
- ◉ Substantial Change to a Degree Program
- ○ Substantial Change to an Area of Concentration
- ○ Substantial Change to a Certificate Program
- ○ Cooperative Degree Program
- ○ Offer Program at Regional Higher Education Center

Payment Submitted: ◉ Yes ○ No | Payment Type: ◉ R*STARS ○ Check | Payment Amount: $250 | Date Submitted: 11/8/2019

Department Proposing Program	Construction Management	
Degree Level and Degree Type	Master of Science	
Title of Proposed Program	Master of Science in Construction Management	
Total Number of Credits	30	
Suggested Codes	HEGIS: 09.2500	CIP: 52.2001
Program Modality	◉ On-campus	○ Distance Education (*fully online*)
Program Resources	◉ Using Existing Resources	○ Requiring New Resources
Projected Implementation Date	○ Fall ◉ Spring ○ Summer	Year: 2020
Provide Link to Most Recent Academic Catalog	URL: catalog.morgan.edu	
Preferred Contact for this Proposal	Name: Dr. Farzad Moazzami	
	Title: Interim Assistant Vice President for Academic Affairs	
	Phone: (443) 885-4668	
	Email: farzad.moazzami@morgan.edu	
President/Chief Executive	Type Name: Dr. Lesia Crumpton-Young	
	Signature: [signature]	Date: 11/8/2019
	Date of Approval/Endorsement by Governing Board: N/A	

Revised 3/2019

PROPOSAL FOR SIGNIFICANT MODIFICATION FOR THE MASTER OF SCIENCE DEGREE IN CONSTRUCTION MANAGEMENT (MSCM)

Modification of Existing Program:
Master of Construction Management (MSCM) Program
from 42 Credit Hours to 30 Credit Hours

Department of Construction Management

School of Architecture + Planning

Morgan State University

BRIEF EXPLANATION FOR MODIFICATION

Morgan State University currently offers two degree programs in Construction Management. These programs were proposed in direct response to the construction industry's desire to hire educated and trained managers who are able to interface with architects, engineers, city planners and code officials, owners, and other players in the construction process. The need to diversify the management workforce has also been expressed. An undergraduate program leading to a Bachelor of Science degree in Construction Management has been in existence since 2010 and the more recent Master of Science in Construction Management program is a 42-credit degree program that was approved by MHEC on December 15, 2010 was started in Spring of 2019. The experience gained in running a baccalaureate program in Construction Management for about 9 years and the changes observed in the workforce skill requirement over these years since the last MSCM program proposal has prompted the modification of the existing MSCM curriculum.

The proposal requests that the curriculum be modified in terms of number of credits, and the relevancy of the courses offered to improve the required skills of a construction manager. According to this proposal there is a reduction in credit from the existing 42 to 30 credits. This modification is proposed on the basis that most of the MS programs in Construction Management in the country are 30 credits. By reducing the credit requirement the program is essentially cutting on the duplication of the content in different courses offered in the existing curriculum thus making it more efficient and effective. The other aspect of modification is the replacement of significant number of courses in the existing curriculum with the new ones to better align with the mission of the graduate program. This shift in focus from techniques-centered curriculum to soft skills development has necessitated the modification of the existing curriculum. It is evident from the proposed curriculum that although the majority of the core course requirement hasn't changed, most of the technology related elective courses have been replaced by project management courses. This is particularly appealing for students who already have baccalaureate degrees in a construction-related field as the technique and technology related courses have already been taught at the undergraduate level.

A. Centrality to Institutional Mission and Planning Priorities

1. Provide a description of the program, including each area of concentration (if applicable), and how it relates to the institution's approved mission.

Morgan State University currently offers two degree programs in Construction Management. These programs were proposed in direct response to the construction industry's desire to hire educated and trained managers who are able to interface with architects, engineers, city planners and code officials, owners, and other players in the construction process. The need to diversify the management workforce has also been expressed. An undergraduate program leading to a Bachelor of Science degree in Construction Management has been in existence since 2010 and the more recent Master of Science in Construction Management program is a 42-credit degree program that was approved by MHEC on December 15, 2010 was started in Spring of 2019.

The proposal is to modify the requirements of the MHEC-approved degree from 42 credits to 30 credits. This is particularly appealing for students who already have baccalaureate degrees in a construction-related field. An additional six credits will be required for students who do not have construction-related preparation or practical experience. The purpose of the MS degree is to educate and train industry leaders so they understand the complexities of construction projects and are able to enhance their skills in managing human and other resources in construction projects.

Morgan State University Mission Statement1 Compared to the MSCM Program's Mission Statement:
[note: program's translation of the University Mission is stated just below the University's mission statement]

University's Mission Statement: Morgan State University serves the community, region, state, nation, and world as an intellectual and creative resource by supporting, empowering and preparing high-quality, diverse graduates to lead the world.
Program's Mission Statement:
The Master of Science in Construction Management (MSCM) is a professional program whose mission is to prepare skillful graduates by providing advanced knowledge and by encouraging critical thinking skills to solve local, regional and global construction related issues.

University's Mission Statement:
The University offers innovative, inclusive, and distinctive educational experiences to a broad cross-section of the population in a comprehensive range of disciplines at the baccalaureate, master's, doctoral, and professional degree levels.
Program's Mission Statement:
The graduate degree will provide even greater access to knowledge and career options in construction by offering interdisciplinary courses that include emerging technologies, risk management, sustainable construction, ethical and legal issues, entrepreneurship, and construction best practices.

University's Mission Statement:
Through collaborative pursuits, scholarly research, creative endeavors, and dedicated public service, the University gives significant priority to addressing societal problems, particularly those prevalent in urban communities.
Program's Mission Statement: Committed to basic and applied research, quality teaching, and service in the field of construction, the program helps to meet the industry demand for qualified construction managers, leaders and entrepreneurs.

Educational Objectives of the Proposed MS Degree Program in Construction Management

The major educational objectives are the following:

[1] http://www.morgan.edu/about/mission_and_vision.html (retrieved 13 February 2019)

A. Provide a challenging learning environment where students acquire high- quality skills and knowledge necessary for managing construction processes and effectively responding to complex construction issues;
B. Expose students to the latest advancements in technology applications and project management systems;
C. Recruit African-American students who are committed and motivated to building a career in the construction industry;
D. Cultivate a research mindset that contributes to sound decision making and increases the body of knowledge applicable to industry;
E. Establish, foster, and strengthen partnerships with construction firms and related industries, as well as national/international associations involved in building activities.

2. Explain how the proposed program supports the institution's strategic goals[2] and provide evidence that affirms it is an institutional priority.
[note: program-specific support for university-level goals noted as bulleted items beneath each University Goal and represent only how the modifications to the existing program provide support]

University *Goal 1: Enhancing Student Success:*
Morgan will create an educational environment that enhances student success by hiring and retaining well qualified, experienced, and dedicated faculty and staff, offering challenging, internationally relevant academic curricula, and welcoming and supporting a diverse and inclusive campus community.

- *Revised program provides greater clarity to course sequence and academic expectations for the student.*
- *A reduction in overall credits will reduce the cost of student attendance by ~28% while not impacting curricular content.*
- *The restructured program will better able students to seek professional internships while pursuing their education and will provide greater rigor and expectations of students.*
- *The proposed modification to the program is intended to raise enrollment in order to generate a critical mass of students and yield stronger peer-to-peer teaching (i.e., an increase in the collaborative learning environment).*

University Goal 2: Enhancing Morgan's Status as a Doctoral Research University:
Morgan will enhance its status as a Doctoral Research University through its success in securing grants and contracts and its faculty's achievements in basic and applied research, professional expression, artistic creation, and creative inquiry. Additionally, initiatives will be designed to enhance doctoral achievement in the science, technology, engineering, and mathematical (STEM) and non-STEM disciplines for underrepresented students of color.

The proposed curriculum offers both research project and thesis option to students. The research project and thesis in Construction Management will be more applied or problem-based research. Students will work on a current issues faced by construction companies. It's expected that the local and regional construction companies will support on this objective by financially supporting the research projects and enhancing the research status of the Morgan as a Doctoral Research University.

University Goal 3: Improving and Sustaining Morgan's Infrastructure & Operational Processes:
Morgan will enhance its infrastructure and processes by improving the efficiency and efficacy of its operating procedures, by focusing on the environmental sustainability of its facilities, and by meeting the technological customer service needs of its students, faculty, staff and community.

[2] Morgan State University strategic goals and descriptions taken from: Morgan State University Board of Regents. Approved 8/2/11. "Growing the Future, Leading the World: The Strategic Plan for Morgan State University, 2011 - 2021." Document found online: http://www.morgan.edu/Documents/ABOUT/StrategicPlan/StrategicPlan2011-21_Final.pdf (retrieved 25 September 2015).

- *The revised program is designed to bring Morgan's program in better alignment with other regional programs offering the same degree. Specifically, the reduction in overall credit hours required to achieve the degree better aligns with the majority of programs in the Mid-Atlantic region who offer the degree at 30 credits. Additionally, the graduate curriculum is designed such that it can be completed in a year and aims at optimizing the available resources.*

University Goal 4: Growing Morgan's Resources

Morgan will expand its human capital as well as its financial resources by investing in the professional development of faculty, staff, and students, seeking greater financial support from alumni, the State and federal governments, private and philanthropic sources, and establishing collaborative relationships with private and public entities. The issue of indirect costs associated with contracts and grants will be revisited.

- *In the long term, this proposal is part of a number of strategies to move the program from its current typical enrollment in the mid-twenties to an enrollment of 36-50 students ideally.*

University Goal 5: Engaging with the Community

Morgan will engage with community residents and officials in the use of knowledge derived from faculty and student research, the sharing of mutually beneficial resources, and the appropriate and timely dispatch of University experts and professionals to collaborate in addressing community concerns.

- *The revised program will continue its mission to educate and train both fresh graduates from the BS program and working professionals from the construction industry. The MS program's research priorities will be in applied and problem based research of the construction industry and as such it is expected that the applied research projects will make an immediate impact to the community. By producing leaders and entrepreneurs in the construction industry the impact the program will make on its community is imminent and significant.*

3. Provide a brief narrative of how the proposed program will be adequately funded for at least the first five years of program implementation. (Additional related information is required in section L)

MSCM program has proven to be viable program since admitting its first batch of students in Spring 2019. There has been a keen interest from the applicants to be admitted to the program. Based on the number of students that have applied for Fall 2019 it can be projected that by the fifth year of the successful implementation of the program there will be 30 full time students and 10 part time students. This will generate enough revenue to self-sustain the program.

4. Provide a description of the institution's commitment to:

a. Ongoing administrative, financial, and technical support of the proposed program

The existing MSCM program was approved by MHEC in December 2010 after the University fully committed it administrative, financial and technical support to the MSCM program. The University has allocated enough resources to support the program.

b. Continuation of the program for a period of time sufficient to allow enrolled students to complete the program.

Morgan State University is fully committed to continuing the proposed MS in Construction Management degree program for a period of time sufficient to allow enrolled students to complete the program.

B. Critical and Compelling Regional or Statewide Need as Identified in the State Plan

(as identified in the State Plan)

1. **Demonstrate demand and need for the program in terms of meeting present and future needs of the region and the State in general based on one or more of the following:**

   a) **The need for the advancement and evolution of knowledge**
   - Modifications to the existing program are intended to update the curriculum and provide students with the necessary skills and knowledge relevant to the profession today.
   - Modifications to the existing program of study will emphasize on students learning more managerial skills compared to the technical know-how emphasized in the existing curriculum.

   b) **Societal needs, including expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education**
   - Changes to the existing program (lowering the overall credit hour requirement) will allow greater access to the professional degree
   - Housed at an HBCU, access to the professional degree will be increased for minority students.
   - There is a high demand of minority owned contractors to meet the requirements of State and Federal agencies to employ these contractors for their construction job. By providing the educational and training needs of these minority owned businesses the program aims to fulfill the the demand-supply gap.

   c) **The need to strengthen and expand the capacity of historically black institutions to provide high quality and unique educational programs.**
   - As the only graduate program in Construction Management in Maryland and one among the few graduate programs in all of HBIs in the country, Morgan State University sees this as a unique opportunity to strengthen and expand the capacity of historically black institutions to provide high quality and unique educational programs.

2. **Provide evidence that the perceived need is consistent with the Maryland State Plan for Postsecondary Education***:*
   [note: specific needs for program modification noted as bulleted items beneath each Postsecondary Education Goal]

   Maryland State Plan for Postsecondary Education Goals [3]:

   Goal 1: Maryland will enhance its array of postsecondary education institutions and programs, which are recognized nationally and internationally for academic excellence, and more effectively fulfill the evolving educational needs of its students, the State, and the nation.
   - *Modification to the existing curriculum will provide a program with stronger sequencing, clarity of student performance at various levels, and strong connectivity to the professional community.*

   Goal 2: Maryland will achieve a system of postsecondary education that advances the educational goals of all by promoting and supporting access, affordability, and completion.
   - *The proposed reduction of program credit hours from 42 to 30 credit hours will provide greater access to potential students by reducing the cost of attendance.*

[3] Maryland Higher Education Commission. 2013. 2013 MARYLAND STATE PLAN FOR POSTSECONDARY EDUCATION. Retrieved from online: http://dlslibrary.state.md.us/publications/Exec/MHEC/ED11-105(b)(3)(i)_2013.pdf (September 24, 2015).

- *Clarification and strengthen of curriculum sequence will better assist students toward program completion.*

Goal 3: Maryland will ensure equitable opportunity for academic success and cultural competency for Maryland's population.

- *The alignment of the MSCM program credit hours will position the program to be less onerous relative to other programs in the state and across the region. The majority of programs in the country have credit hour requirements of about 30 credit hours.*

Goal 4: Maryland will seek to be a national leader in the exploration, development, and implementation of creative and diverse education and training opportunities that will align with State goals, increase student engagement, and improve learning outcomes and completion rates.

- *proposed modifications to the existing program represents a creative response to course sequencing, development of increased curricular rigor, and a resultant increase in student outcomes.*

Goal 5: Maryland will stimulate economic growth, innovation, and vitality by supporting a knowledge-based economy, especially through increasing education and training and promoting the advancement and commercialization of research.

- *Modification of the existing program is intended to develop stronger relationships of students with applied research opportunities as each student will have to work on directed fieldwork research or thesis that will be more applied in nature.*

Goal 6: Maryland will create and support an open and collaborative environment of quality data use and distribution that promotes constructive communication, effective policy analysis, informed decision-making, and achievement of State goals.

- *The results of research (both directed fieldwork and thesis) will be shared and circulated to a wider public by making it available to the Library and any important discoveries will be disseminated through the publication of research papers.*

C. Quantifiable & Reliable Evidence and Documentation of Market Supply & Demand in the Region and State

1. **Describe potential industry or industries, employment opportunities, and expected level of entry (ex: mid-level management) for graduates of the proposed program.**

   The Construction industry provides numerous of job opportunities for construction managers. Specifically, jobseekers with a bachelor's degree in construction science, construction management, or civil engineering, coupled with construction experience, will have the best job prospects.

   The MS in Construction Management serves as an excellent platform to develop mid to senior management for the construction industry. The program produces industry leaders that exhibit strong technical and managerial skills, apply scientific methodologies to problem-solving, are critical thinkers, exercise creativity, and inject innovation into the process.

2. **Present data and analysis projecting market demand and the availability of openings in a job market to be served by the program.**

   The establishment of B.S Degree in Construction Management at Morgan in 2010 has been very valuable to the Baltimore-Washington region in supplying the needed construction professionals. However, with the experience of

providing education for 10 years at undergraduate level, the need for a more specialized managerial level education has been suggested and recommended by the Industry Advisory Board Members of Construction Management at Morgan State University. According to Maryland Center for Construction Education & Innovation (MCCEI), there is a demand for 9,715 construction managers and engineers with bachelor's degrees. But, the state of Maryland is only producing 1,020 construction managers and engineers. To address the needs of the industry, over the years, we have made modifications to the program's curriculum to focus more on project management and leadership development courses as opposed to acquiring just technical skills for the construction industry. It is envisaged that with the proposed revisions, the curriculum will be more aligned to meet this essential skill in our Construction Management graduates.

Table 1: Employment projections data for Construction Managers, 2016-26 (Source: Bureau of Labor Statistics)

Occupational Title	***Employment, 2016***	***Projected Employment, 2026***	***Change, 2016-26***	
			Percent	*Numeric*
Construction managers	*403,800*	*449,900*	*11*	*44,800*

3. Discuss and provide evidence of market surveys that clearly provide quantifiable and reliable data on the educational and training needs and the anticipated number of vacancies expected over the next 5 years.

As shown in Table 1 above, there is a demonstrated need of skillful Construction Managers at a rate of about 5000 Construction Managers each year for the next five years and beyond. Since experience is an essential job requirement at the level of Construction Manager, the Graduate program curriculum expects to supplement that requirement through teaching and research that are appropriate to the needs of mid to higher level management of a construction firm.

4. Provide data showing the current and projected supply of prospective graduates.

Although no recent data could be compiled here, a study undertaken by Bilbo et. Al. indicates a production level of approximately 3596 construction graduates per year whereas the construction industry survey indicated a demand for approximately 7877 construction graduates per year. The study finds that the supply deficit is being filled by other types of college graduates, most notably graduates from civil engineering, and business degree programs. The intent of the study is to provide a representation of the current production level of, and the demand for construction graduates, for the purpose of comparing supply and demand. The results of the survey data indicate an increasing demand for construction education graduates. Additionally, the survey data reveals the supply of construction graduates is not currently meeting the demands of the construction industry, nor will it be meeting future industry demands. (Bilbo et. al, 2007)[4]

D. Reasonableness of Program Duplication

1. Identify similar programs in the State and/or same geographical area. Discuss similarities and differences between the proposed program and others in the same degree to be awarded.

As the first graduate program of Construction Management in Maryland, the program does not represent duplication of any existing programs. In fact, there are only four other ACCE accredited graduate programs in Construction Management in the US that include Clemson University, Kennesaw State University, Wentworth Institute of Technology, and Texas A& M University (College Station). Other Master of Construction Management programs (not ACCE accredited) in the region include the following:

[4] Bilbo, D. ; Collins, C.; Waseem, M. ; Burt, R. (2007) "A Study of the Supply and Demand for Construction Education Graduates" ASC Proceedings

OUT-OF-STATE PROGRAMS

- *Virginia Tech [32 credit hours]*
  - *Similarities:*
    - *Focus on business and management courses*
  - *Differences:*
    - *Offers industry track and research track options*

- *Drexel University [45 credit hours]*
  - *Similarities:*
    - *Project Management courses form integral part of the curriculum*
  - *Differences:*
    - *Also offers certificate programs in Construction Management*
    - *Offers three concentrations- Construction Project Management, Real State, Sustainability and Green Construction.*

2. Provide justification for the proposed [modification to the existing] program.

Program Marketability & Student Recruitment:

- *Modifications to the existing program are designed to update the curriculum and develop professional Construction Managers needed to fill the projected jobs into the future. When the MS in Construction Management program and curriculum was proposed in 2010, the focus was on acquiring technical skills mostly related to Architecture. With the ten years of experience of running the Undergraduate program in Construction Management, it has been realized that the technical skills required for the industry can be imparted at the Undergraduate level. The critical soft skills of construction project management, such as team building, risk management, decision making etc. would be more valuable for the mid to senior level management in the construction industry to which this Graduate Program is targeted. This change of focus is the primary reason for modification of the curriculum from the previously approved curriculum. With this change, there is also a reduction in the number of required credit hours to graduate from 42 to 30. With the previous program taking more than 2 years AND 42 credit hours, the pursuit of the degree is easily dismissed by prospective students when overall time and cost are figured. The program shift to 30 credit hours does not represent a reduction in content, rather a reduction in student cost.*

- *The revised program represents greater educational access to a professional degree delivered through an HBCU. The change in overall credit hour requirements brings the program into better alignment with other comparable Construction Management Graduate Programs in the Country.*

Curriculum Update:

- *The proposed alterations to the existing curriculum allows the students to upgrade their soft skills in Construction Management. Soft skills have been identified to be critical success factors in Project Management.*

Connection to Allied Disciplines in the School of Business and Management:

- *Because Project Management graduate program in the School of Business and Management has been a popular choice of Construction Management students that have graduated from Construction Management program, the proposed modification to the existing curriculum allows the students to elect courses in Project*

Management program. This choice provides them with the necessary certification such as Project Management Professions (PMP) that is offered by the Project Management Graduate Program at Morgan State University.

E. Relevance to High-Demand Programs at Historically Black Institutions (HBIs)

1. Discuss the program's potential impact on the implementation or maintenance of high-demand programs at HBI's.

Construction Management program is a high demand program and thus its significance to the success of Morgan State University cannot be overstated. Its undergraduate program has been a very successful since its inception in 2010 and has seen a continuous growth in student enrollment. In order to meet the growing demand of skilled Construction Managers in the Baltimore- Washington region, it is imperative to offer a graduate program in Construction Management that would be the choice for minority students. In order for the program to be cost affordable modification to the existing curriculum was needed.

F. Relevance to the Identity of Historically Black Institutions (HBIs)

1. Discuss the program's potential impact on the uniqueness and institutional identities and missions of HBIs.

Modification to the existing program of study maintains the only graduate, professional program in Construction Management at an HBI in the state of Maryland. The instruction of minority students toward a professional degree is part of Morgan's mission and the Construction Management program plays a significant role to that end. In addition, the program conducts significant problem based research through the application of directed field work to benefit the local construction industry. This serves the University's mission of being the preeminent public urban research university in the state of Maryland.

G. Adequacy of Curriculum Design & Program Modality, and Related Learning Outcomes (as outlined in COMAR 13B.02.03.10)

1. **Describe how the proposed program was established, and also describe the faculty who will oversee the program.**

   The proposed program is a result of constant push by Construction Company executives from Baltimore-Washington region to the unmet needs of their workforce. The program was established through a rigorous review of unmet needs by administrators of School of Architecture and Planning. The program will be overseen by a Graduate Program Director under the leadership of the Department Chair. A diverse group of faculty with backgrounds in civil engineering, construction management, architectural engineering, and business will instruct and train the prospective graduates. Please see Section I for a detailed list of the faculty's backgrounds.

2. **Describe educational objectives and learning outcomes appropriate to the rigor, breadth, and (modality) of the program.**

   For mid-career and experienced professionals, this graduate degree will provide even greater access to knowledge that is essential for excelling in today's fast paced and ever changing local and international arena. Career advancing topics in the MSCM program include emerging technologies, risk management, sustainable construction, ethical and legal issues, entrepreneurship, and construction best practices.

   The major educational objectives are the following:

   A. Provide a challenging learning environment where students acquire high- quality skills and knowledge necessary for managing construction processes and effectively responding to complex construction issues;
   B. Expose students to the latest advancements in technology applications and project management systems;
   C. Recruit African-American students who are committed and motivated to building a career in the construction industry;
   D. Cultivate a research mindset that contributes to sound decision making and increases the body of knowledge applicable to industry;
   E. Establish, foster, and strengthen partnerships with construction firms and related industries, as well as national/international associations involved in building activities.

   To meet accreditation standards set by American Council for Construction Education (ACCE) in the future, the proposed changes in MS degree curriculum now will ensure alignment with the following student learning outcomes.

Table 2: Intended Student Learning Outcomes:

Student Learning Outcomes	***Primary Course in Which it is Achieved***
1. Create effective and professional written communications	*CMGT 794-Directed Fieldwork, CMGT 799-Thesis*
2. Apply critical thinking.	*CMGT 640-Construction Management Research*
3. Apply problem solving techniques.	*CMGT 794-Directed Fieldwork, CMGT 799-Thesis*
4. Apply decision making techniques.	*CMGT 630 – Construction Risk Management*
5. Apply research methods.	*CMGT 640- Construction Management Research*
6. Apply advanced communication technology.	*CMGT 631- Construction Cost Estimating & Analysis*
7. Apply professional ethics.	*CMGT 625- Contracts and Legal Issues in Construction*
8. Apply advanced construction management practices.	*CMGT 633- Construction Planning and Scheduling*

9. Understand risk management.	*CMGT 630- Construction Risk Management*
10. Understand the principles of leadership in business.	*CMGT 625- Contracts and Legal Issues in Construction; PROJ 655- Building & Leading Successful Project Teams*

3. Explain how the institution will:

a) provide for assessment of student achievement of learning outcomes in the program

Morgan State University will assess student achievement of the learning outcomes per the regulations specified by the Middle States Commission on Higher Education (MSCHE) and the future plan of the program is to get the accreditation from the American Council for Construction Education (ACCE).
Under MSCHE, the University will use Standard V, Educational Effectiveness Assessment, of the Standards for Accreditation and Requirements of Affiliation. Standard V requires:
Assessment of student learning and achievement demonstrates that the institution's students have accomplished educational goals with their program of study, degree level, the institution's mission, and appropriate expectations for institutions of higher education.

b) document student achievement of learning outcomes in the program

Table 3: Student Learning Outcomes, Means of Assessment, and Criterion for Success

Outcome	***Course***	***Means of Assessment***	***Criterion for Success***	***Actions Taken***	***Results***	***Analysis of Results***	***Actions Planned***
1. Create effective and professional written communications	*CMGT 794- Directed Fieldwork, CMGT 799- Thesis*	*A written report or Thesis will be the means of assessment.*	*A "pass" or a "fail" grade will be used for measuring success. 100% student will obtain a passing grade.*				
2. Apply critical thinking.	*CMGT 640- Construction Management Research*	*Students will be assigned with critiquing journal articles and perform gap analysis to come up with their research proposal.*	*At least 80% of the student will obtain a "B" grade or better on class assignments.*				
3. Apply problem solving techniques.	*CMGT 794- Directed Fieldwork, CMGT 799- Thesis*	*Students are to define a problem within their respective business organization or within their specific industry fields and create a project that defines a problem and a method of analysis to verify a solution to the problem.*	*A "pass" or a "fail" grade will be used for measuring success. 100% student will obtain a passing grade.*				
4. Apply decision making techniques.	*CMGT 630 – Construction Risk Management*	*Case studies on situations where informed decision making is required will be assigned.*	*At least 80% of the student will obtain a "B" grade or better*				

			on assignments.				
5. Apply research methods.	*CMGT 640-Construction Management Research*	*Students should present their 3 page research design identifying qualitative/quantitative research method.*	*At least 80% of the student will obtain a "B" grade or better on research design paper.*				
6. Apply advanced communication technology.	*CMGT 631-Construction Cost Estimating & Analysis*	*Students will prepare a 4-5 page paper demonstrating their knowledge and understanding of new technologies, techniques, and professional applications in the fields of construction, engineering, and business.*	*At least 80% of the student will obtain a "B" grade or better on application paper.*				
7. Apply professional ethics.	*CMGT 625-Contracts and Legal Issues in Construction*	*Different ethical and legal cases in Construction are assigned and graded.*	*At least 80% of the student will obtain a "B" grade or better on application paper.*				
8. Apply advanced construction management practices.	*CMGT 633-Construction Planning and Scheduling*	*Create a project plan and a schedule using scheduling software P6 and BIM.*	*At least 80% of the student will obtain a "B" grade or better on class assignments.*				
9. Understand risk management.	*CMGT 630-Construction Risk Management*	*Students should survey and document at least three Construction Companies on their risk management practices.*	*At least 80% of the student will obtain a "B" grade or better on class assignments.*				
10. Understand the principles of leadership in business.	*CMGT 625-Contracts and Legal Issues in Construction, PROJ 655-Building & Leading Successful Project Teams*	*Interview at least 3 leaders of local construction companies and present the type of leadership style they utilize.*	*At least 80% of the student will obtain a "B" grade or better on class assignments.*				

4. Provide a list of courses with title, semester credit hours and course descriptions, along with a description of program requirements.

Description of Program Requirements

Admission Requirement:

To be fully accepted into the program, students must have completed an undergraduate degree with a cumulative GPA of no less than 3.0 on a 4.0 scale. Students who have not met the 3.0 undergraduate cumulative GPA requirements, or do not meet all the program specific prerequisites, are provided a conditional acceptance until they meet the minimum GPA requirement in the program. A minimum of 2.5 is required for conditional acceptance. Upon doing so, students are automatically converted to full acceptance status. If conditionally accepted student fails to achieve a minimum 3.0 cumulative GPA after completing three courses, then he or she will be academically dismissed, and will not be permitted to enroll in any further courses. Other requirements for admission in the program are:

- *3 letters of recommendation*
- *Personal Statement*
- *Official transcripts for all institutions attended*
- *Completed application*
- *Detailed curriculum vitae (CV)/resume*

All the above stated requirements also apply to International Students. International students seeking admission to MSCM program will also need to provide sufficient evidence of English proficiency as stated in Graduate Catalog.

Degree Requirement:

All students pursuing the MS in CMGT are required to earn 30 credit hours of course work. Similar to the existing program, the MSCM program offers two options, thesis and non-thesis tracks. The thesis track as well as non-thesis track requires 30 credits, with 18 core courses and 12 credits in electives. Table 4 presents the core courses and also compares them with the old curriculum, and Table 5 shows a list of suggested elective courses again compared with the old curriculum.

Table 4: List of Core Courses – Required for all students

New Curriculum (18 Credits)		
Course #	**Course**	**CR**
CMGT 630	Const. Risk Mgmt	3
CMGT 633	Construction Planning and Scheduling	3
CMGT 640	Construction Mgmt Research	3
CMGT 625	Contracts & Legal Issues In Const.	3
CMGT 631	Const. Cost Estimating & Analysis	3
CMGT 794	Directed Fieldwork (Non-Thesis Option Only)	3
*CMGT 799	Thesis (Thesis Option Only)	3

Old Curriculum		
Course#	**Course**	**CR**
FIN 633	Risk Analysis and Insurance	3
CMGT 633	Construction Planning and Scheduling	3
CMGT 640	Construction Management Research	3
CMGT 625	Contracts and Legal Issues In Construction	3
CMGT 631	Const. Cost Estimating & Analysis	3
CMGT 689	Directed Fieldwork	3
CMGT 699	Thesis	

Note:

*Students will have to take CMGT 797 if they do not complete CMGT 799- Thesis in the semester when they are registered for the course.

Table 5: List of Elective Courses

New Curriculum		
Course#	**Course**	**CR**
CMGT 642	Special Topics in Construction	3
PROJ 600	Foundations in Project, Prog & Portfolio Mgmt	3
PROJ 655	Building & Leading Successful Project Teams	3
PROJ 670	Managing Project	3
IEGR 512	Adv. Project Management	3
ARCH 533	Architectural Tech V (Building Materials)	3
ARCH 561	Architectural Practice, Law & Management	3
ENST 573	Principles of Site Planning	3
CREP 522	Land Development Law	3

Old Curriculum		
Course#	**Course**	**CR**
CMGT 642	Special Topics In Construction	3
ARCH 513	Technology I (Statics and Strength Of Materials)	3
ARCH 522	Architectural Tech II (Building Systems Structures)	3
ARCH 523	Architectural Tech III (Environmental Controls)	3
ARCH 532	Architectural Tech IV (Building Systems Structures)	3
ARCH 533	Architectural Tech V (Building Materials)	3
ARCH 541	Architectural Tech VI (Production Techniques)	3
CMGT 612	Computer Integrated Construction Management	3
CMGT 620	Construction Safety Management	3
CMGT 635	Sustainable Construction	3
ACCT 500	General Accounting Principles And Concepts	3
ACCT 600	Accounting For Decision Making	3
ACCT 603	Financial Statement Analysis	3
BUAD 521	Organizational Behaviors and Environment of Business	3
BUAD 625	Organizational Leadership and Ethics	3
BUAD 650	Business Research Methods	3

Note:
For non-CM Students, the following additional CMGT courses, as shown in Table 6 should be taken as a pre-requisite for all the CMGT courses:

Table 6: List of Pre-requisite Courses for non-CM Students

New Curriculum (6 Credits)		
Course#	**Course**	**CR**
CMGT 601	Principles of Construction Management I	3
CMGT 602	Principles of Construction Management II	3

Old Curriculum		
Course#	**Course**	**CR**
CMGT 601	Principles of Construction Management	3

Note the color code:

New course

Existing Course in MHEC proposal

COURSE DESCRIPTIONS
Catalog Descriptions of Courses:

CMGT 601- Principles of Construction Management I
Theory and practice of construction management including interpretation of construction drawings, specifications and understanding of materials and methods, contracts, quantity take-off and estimating for a construction project.

CMGT 602- Principles of Construction Management II
This course covers the basic principles of planning, scheduling, organizing, staffing, directing, and managing construction projects.

CMGT 625 Contracts & Legal Issues in Construction
Introduce the rules and regulations governing construction industry practices and activities, understanding the principles of contract law, including contractor's license law, state lien laws, workers compensation, proving costs and damages, and claims related to schedule, delays and acceleration.

CMGT 630- Construction Risk Management
Managing risk of construction projects via categorization, assessment techniques, minimization strategies and contingency planning for different types of construction projects ranging from small to large.

CMGT 631- Construction Cost Estimating and Analysis
Incorporates emerging estimating and cost control measures in the construction industry. Conceptual and definitive estimating, cost developing, cost analysis methods, project delivery implications, international work implications, and computer applications and modeling.

CMGT 633- Construction Planning & Scheduling
Introduction to the basics of lean production management, especially about how they are applied to the AEC industry to improve the operation management and productivity. Application of project planning and scheduling techniques such as network analysis and CPM including advanced topics such as project control and stochastic modeling with the use of contemporary computerized software is covered.

CMGT 640- Construction Management Research
This course offers an overview of the process of conducting a Directed Field Work (CMGT 794) or thesis (CMGT 799). It discusses resources available to graduate students and provides a list of research topics that are of interest to CMGT faculty. The course will also provide students guidance on writing project report or thesis.

CMGT 642- Special Topics in Construction
New or special course on recent developments in some phase of construction projects. Specific topics are identified for each section and varied from semester to semester.

CMGT 794- Directed Fieldwork
This course is a formal investigation into a construction industry problem. The directed fieldwork is an applied research project. The course culminates in a detailed project report and an oral presentation. Prerequisite: CMGT640

CMGT 799- Thesis
The thesis topic will usually be in an area of interest discovered by the student in early stages of the Construction program or work experience. Students may enroll for a maximum of 3 hours per semester for thesis credit. The student works independently under the supervision of the thesis advisor on an inquiry that is significant to the construction industry. The student is expected to submit a substantial body of research work and to defend the research work. Prerequisite: CMGT640

ARCH 561- Architectural Practice, Law & Management

Students examine the role of the landscape architect in a variety of work environments such as private practice, government sector, education and related industries. Study includes the legal, ethical, and contractual responsibilities of landscape architectural practice and basic procedures, management and information systems used in professional offices.

PROJ 600- Foundations in Project, Program & Portfolio Mgmt
This problem-based interdisciplinary course introduces project management tools and techniques. It introduces program and portfolio management in corporate and government settings. Students use practical applications to manage projects from start to finish. Students use software tools for planning and monitoring projects.

PROJ 655- Building & Leading Successful Project Teams
The course focuses on project communication needs, how to plan for meeting those needs, project stakeholder management, and related project human resource issues. It introduces students to a communications model, techniques to improve communications, crisis communications, identifying stakeholders, and virtual teams. Students learn the dynamics of human resource planning tools, receive an overview of key organizational behavior theories and leadership theories, negotiation, team development, and conflict management. The course uses case studies to augment student learning. Prerequisite: PROJ 600

PROJ 670- Managing Project
This course focuses on three of the key success factors for execution of most projects: procurement, project quality, and risk management. It introduces students to the challenges associated with determining what the project team will not produce internally, acquiring the external resources needed, integrating procurements into the overall project plan, and conduct, administration, and closing of procurements. Students are introduced to the dynamics of contract negotiation, and basic contracting legal requirements. Students are introduced to topics such as quality processes, quality assurance, and quality control and best practices to insure delivery with required quality, integrating quality into projects, and selecting and applying pertinent quality metrics. Finally, concepts of identification and classification of potential risks to successful completion of the project, analyzing identified risks, developing mitigating actions to take should any of the identified risk events occur, and monitoring techniques for risk management are presented. The course uses case studies and team exercises to augment student learning. Prerequisite: PROJ 600

IEGR 512- Adv. Project Management
This is a study of project management theory and practices, emphasizing the strategic management for engineering activities. The concept of project planning and organization project life cycle project scheduling, organizational forms and conflict resolution will be addressed. The use of cost and time value of money, schedule and technical planning and control methods such as WBS, and network models as AOA, AON, CPM/PERT will be stretched. Proposal writing and the use of project management software tools for creating a typical project plan will be explored.

ARCH 533 - Architectural Technology V (Building Materials)
In this course, students learn to evaluate selected sets of building materials. Additionally, students will be required to apply their analytical skills to the selections of materials for a selected project. Emphasis will be given to the relationship between design and construction. Although the analytical process to be taught can be universally applied in material selections, the focus will be on those materials and techniques commonly used in the Central Atlantic Region of the United States. The principles of specification writing and existing CSI standards are introduced and applied on specific assignments.
Prerequisite(s) ARCH 523

ARCH 561 - Architectural Practices, Law and Management
The objective of this course is to explore the roles, relationships, and legal responsibilities of an architect. The architect's professional interaction with consultants, owners, contractors and the various governmental authorities that regulate the building industry will be discussed. The fundamentals of professional practice and ethics, as well as various management tools will also be explored. Prerequisite(s) ARCH 540.

CREP 522 - Land Development Law
This core course is designed to add specialized information to the student's general understanding of the land development process in the field of planning. The course provides students with an awareness of the legal aspects of planning and how the legal organization

and system effects planning. Attention focuses on the major legal principles, which apply to public and private use of the physical environment, and especially the land development process. Students also become acquainted with the legal framework, legislative and administrative processes regarding public response, review, and input on development rules and regulations.

ENST 573- Principles of Site Planning
The course introduces architects and planners to the principles and practices of site planning. The course covers site analysis, layout of major site features (buildings, roads, parking areas, etc.), and the design of outdoor spaces for pedestrian use.

5. **Discuss how general education requirements will be met, if applicable.**

   Not Applicable. This is a graduate program.

6. **Identify any specialized accreditation or graduate certification requirements for this program and its students.**

   MS degree programs in Construction Management will seek accreditation from the American Council for Construction Education (ACCE). At present, there are only four graduate programs in construction management that are accredited, which includes Clemson University, Wentworth Institute of Technology, Texas A&M University, and Kennesaw State University.

   Established in 1974, the ACCE, is the leading organization that ensures students receive quality professional education in construction management. It is recognized by the Council for Higher Education Accreditation (CHEA). To obtain accreditation, candidate schools must pass certain standards and criteria pertaining to the following: Organization and Administration; Budget and Financial Management, Curriculum, Faculty and Students, Facilities and Services, Relations with the Construction Industry and the General Public, and Program Quality Outcome Assessment.

7. **If contracting with another institution or non-collegiate organization, provide a copy of the written contract.**

   Not Applicable.

8. **Provide assurance and any appropriate evidence that the proposed program will provide students with clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technology competence and skills, technical equipment requirements, learning management system, availability of academic support services and financial aid resources, and costs and payment policies.**
   All the graduate programs at Morgan State University, in addition to being administered by their respective departments and Schools, are also reviewed, assessed and supported by the School of Graduate Studies. The Graduate Council in the School of Graduate Studies serves as an advisory body to the Vice President for Academic Affairs. The Council reviews proposed policies and curricula for all graduate programs and submits recommendations for consideration by the Vice President for Academic Affairs. The Council is composed of chairpersons of departments offering graduate courses or degree programs, academic deans, one faculty member elected by the faculty of each school and one student representative from each school. The Dean of the School of Graduate Studies serves as chairperson. Ex-officio members include the President, Vice President for Academic Affairs, and graduate program coordinators.

   School of Graduate Studies, through its Graduate Catalog, provides clear information on Regulations and Procedures of the following items:

   - *Admissions*
   - *Standards of Scholarship*
   - *Financial Support based on merit:*
     - *Teaching Assistantships*
     - *Fellowships*
     - *Scholarships*

- *Graduate Research Assistantships*
- *Graduate Administrative Assistantships*

- *Course Offerings*
- *Program Descriptions*
- *Academic Processes and Procedures*
- *Registration*
- *Withdrawal and Separation (Leaves, etc.)*

9. Provide assurance and any appropriate evidence that advertising, recruiting, and admissions materials will clearly and accurately represent the proposed program and the services available.

The graduate program proposal are reviewed and assessed by several layers within the University that includes the Department of Construction Management, School of Architecture and Planning, School of Graduate Studies, Office of the Provost before being sent to MHEC for review and approval. Additionally, program's advertising, recruiting, and admissions materials will clearly and accurately represent the proposed program and the services available.

H. Adequacy of Articulation

1. If applicable, discuss how the program supports articulation with programs at partner institutions. Provide all relevant articulation agreements.

This program does not currently have articulation partners. The BSCM program at Morgan State University and other Universities will supply the bulk of the student population applying to MSCM program. The BSCM program at Morgan State University has articulation agreements with Community Colleges in the neighboring counties.

I. Adequacy of Faculty Resources

(as outlined in COMAR 13B.02.03.11)

1. Provide a brief narrative demonstrating the quality of program faculty. Include a summary list of faculty with appointment type, terminal degree title and field, academic title/rank, status (full-time, part-time, adjunct) and the course(s) each faculty member will teach (in this program).

Core courses in Construction Management will be taught by full time faculty and adjunct faculty that are listed below. Elective courses are from Project Management (School of Business and Management), Industrial and Systems Engineering (School of Engineering) and Architecture (School of Architecture and Planning

Currently the faculty consists of the following individuals:

Professor

- *N/A -- there are currently no full professors serving in the program.*

Associate Professor (tenure-track)

- *Lewis Waller, PhD, Department Chair, Construction Management*
  - *Courses generally taught:*
    - *Directed Fieldwork*
    - *Principles of Construction Management I & II*

Assistant Professor (tenure-track)

- *Kamalesh Panthi, Ph.D., Program Director, MSCM*
  - *Doctorate in Civil Engineering (Construction Management)*
  - *Courses generally taught:*
    - *Construction Risk Management*
    - *Construction Planning and Scheduling*
    - *Construction Cost Estimating and Analysis*
    - *Construction Management Research*

- *New Position*

- *Due to the expansion of the program, we would need two faculty positions to implement the proposed program.*

Adjunct Instructor (non-tenure-track)

- *Coretta Bennett, LEED AP*
  - *MBA in Strategic Business Policy and Finance, BS in Civil Engineering*
  - *Courses generally taught:*
    - *Construction Law and contracts*

- *Benjamin Morgan*
  - *Master in Engineering, Architectural Engineering and Project Management*
  - *Courses generally taught:*
    - *Construction Project Management*

- *Marvin Bennett, PE*
  - *MS in Civil Engineering*
  - *Courses generally taught:*
    - *Construction Operations*

2. Demonstrate how the institution will provide ongoing pedagogy training for faculty in evidenced-based best practices, including training in:

a) Pedagogy that meets the needs of the students

The pedagogical approach
Problem-Based Learning (PBL) is intended to be adopted for delivering most of the courses in the program. It is a teaching method in which complex real-world problems are used as the vehicle to promote student learning of concepts and principles as opposed to direct presentation of facts and concepts. In addition to course content, PBL can promote the development of critical thinking skills, problem-solving abilities, and communication skills. It can also provide opportunities for working in groups, finding and evaluating research materials, and life-long learning (Duch et al, 2001)[5].

All faculty receive regular periodic and recurring pedagogical training during the academic year from Center for Excellence in Teaching and Learning (CETL) at Morgan State University. The Center for Excellence in Teaching and Learning (CETL) is a unit under the auspices of the Division of Academic Affairs. The overall goal of CETL is to assist faculty, staff, and graduate teaching assistants (TAs) in creating innovative and active learning environments. Its mission is to promote best practices in teaching that celebrate diversity, equity, and inclusiveness and lead to student success. CETL's work is guided by the scholarship on teaching and learning that is in turn grounded in the research in the field of faculty educational development. Opportunities include orientations and training for new faculty and TAs, mini-workshops, faculty institutes and conferences, online resources, and classroom observations and consultations focused on formative assessment for continuous improvement of teaching and learning.

b) The learning management system

Blackboard is the Learning Management System adopted by the University. Faculty members receive training and support from the Center for Excellence in Teaching and Learning (CETL).

c) Evidence-based best practices for distance education, if distance education is offered.

The MSCM program will continue to be a predominantly face-to-face program. However, the program anticipates an increase of online and hybrid course offerings moving forward. Faculty will be trained using the Quality Matters curriculum and courses are developed using the Quality Matters assessment rubric. In addition, faculty have undergone training with the University's Instructional Developer to learn best practices with regard to technology, digital tools, and curriculum delivery.

[5] Duch, B. J., Groh, S. E, & Allen, D. E. (Eds.). (2001). The power of problem-based learning. Sterling, VA: Stylus.

Shifting some of the coursework for the program from face-to-face to online/hybrid format will allow many students to continue working while pursuing the degree. This movement toward additional online/hybrid course opportunities for students is in keeping with the University's goal of educational access.

Blackboard Collaborate in Blackboard Learning Management System will be used as a web conferencing tool. AdobeConnect is another instructional tool that will be used to communicate with students in synchronous mode whereas Blackboard will be used for asynchronous instruction.

J. Adequacy of Library Resources

(as outlined in COMAR 13B.02.03.12)
Describe the library resources available and/or the measures to be taken to ensure resources are adequate to support the proposed program.

The Earl S. Richardson Library is the main academic information resource center on the campus. The new building which covers approximately 222,517 square feet opened in 2008. It houses approximately 400,000 volumes and access to 1,900 periodical titles. The Library subscribes to over 100 online databases. Reading and study spaces provide wired and wireless access to databases for research.

It is located in a highly prominent site, fronting Hillen Road. The state-of-the-art building includes a multi-story lobby, lounges, private group study rooms, meeting rooms, a technology-enhanced instruction room, computer laboratory, and other computers in many locations.
Specifically:

Staffing: *Full-time positions include: eleven (11) professional librarian positions, two (2) information technology (IT) positions, and fifteen (15) support staff positions. Two of the full-time librarians are contractual employees. And, there are three (3) part-time contractual support staff members who assist in providing late evening and weekend coverage. With the increased capacity that the new building affords, and the Library's strategic development plan, there is a need for additional staff; but fiscal constraints do not permit augmentation at this time.*

Collections: *NA books in collection, as of June 30, 2014 = 5,127*

Electronic Databases: Over 100 on-line databases are available through Morgan's library Web site http://library.morgan.edu/electron/db/da.htm. Other electronic resources include e-books and e-journals all of which are accessible via computer from any campus network connection and from off campus to any registered library patron. Research Port is a search engine used to find electronic databases and journals when doing research both on-campus and off-campus http://researchport.umd.edu/databases

Interlibrary loan (ILL) services: There is a direct borrowing agreement among the libraries of Maryland's public colleges and universities. The University System of Maryland and Affiliated Institutions (USMAI), which includes Morgan, maintain an on-line catalog. Using catalogusmai, library users are able to search for resources, place a hold on items, and have circulating materials shipped to their home library. Also, with proper identification, Morgan students and faculty may borrow directly from any participating institution. In addition to in-state borrowing, interlibrary loans may be secured through the On-line Computer Library Center (OCLC) system that allows access to national and international resources.

ILLiad and Interlibrary Loan (ILL) are available for Morgan's faculty, staff, enrolled students, and, administrators borrowers. OCLC ILLiad provides a web-based interface that allows users to access their ILLiad accounts from wherever they have access to the Internet. Users can select the method and location of delivery of requested materials. The Library

is able to offer users the option of electronic delivery of articles in PDF format (Adobe's Portable Document Format). Paper delivery is also available (paper delivery is the ILLiad default).
Morgan also participates in the reciprocal borrowing agreement of the Baltimore Academic Libraries Consortium (BALC). In addition to the public institutions within the Baltimore metropolitan area, participants in this consortium include certain private colleges and universities.

K. Adequacy of Physical Facilities, Infrastructure and Instructional Equipment

(as outlined in COMAR 13B.02.03.13)

1. Provide an assurance that physical facilities, infrastructure and instruction equipment are adequate to initiate the program, particularly as related to spaces for classrooms, staff and faculty offices, and laboratories for studies in the technologies and sciences. If the program is to be implemented within existing institutional resources, include a supportive statement by the President for adequate equipment and facilities to meet the program's needs.

The MSCM program is housed within the Center for the Built Environment & Infrastructure Studies (CBEIS). CBEIS is a 126,000 GSF USGBC Gold LEED certified shared facility for engineering and design programs at Morgan State University. Some of the specific features of CBEIS include:
34 Classrooms/Studios/Computer Labs, 100 Offices, 10 Group Study Rooms, Conference Rooms, Jury Rooms, Fabrication Shop, Atrium spaces with skylights, Lounges, Green Roof, Loading/Service and a parking garage.

The CBEIS building houses the School of Architecture + Planning as well as two departments from the School of Engineering (civil engineering & transportation studies). The MSCM program benefits from the presence of many computer labs and available technologies in the building. The computer labs for the Center for Built Environment and Infrastructure Studies (CBEIS) are limited in use to members of the School of Architecture and Planning and School of Engineering. There are two (2) computer labs exclusive to the School of Architecture and Planning located in the studio-111A (PC Lab) and 111C (Apple Mac Lab). The School has been diligent to assist in training of students and faculty as well as targeting certain computer and production labs for the use of SA+P students and faculty only. Faculty are encouraged to connect course product and/or research to the computer and research resources made available within the School. All of the resources of the School are made available to students at no cost or significantly reduced cost than outside vendors (in the case where resources are supply intensive such as printing, laser cutting, and 3D printing). Perhaps the most valuable attribute of the facility is the atrium where students and faculty can mingle, discuss, and where public presentations can be held in full view of the university. This increases the exposure of the program significantly.

Each member of the program faculty have dedicated office space within CBEIS that is adequate for faculty work tasks as well as meeting with students and others. The offices are one faculty member per office. Each office which are approximately 18'X24'.

2. Provide assurance and any appropriate evidence that the institution will ensure students enrolled in and faculty teaching in distance education will have adequate access to:

a) An institutional electronic mailing system, and

Morgan State University provides an institutional electronic mailing system to all students and faculty. The capability is provided to all students and faculty in all the institution's modalities of course delivery. Students and faculty are required to use the institution's email addresses in all University matters and communications.

b) A learning management system that provides the necessary technological support for distance education

Morgan State University provides Blackboard as the Learning Management Systems (LMS) which has the Blackboard Collaborate feature as a web conferencing tool for synchronous instruction. The use of Blackboard is required for every course offered at the University; as a result, every course has a classroom on Blackboard. All syllabi, grades, and assignments must be entered in to Blackboard on a timely basis throughout the semester.

L. Adequacy of Financial Resources with Documentation

(as outlined in COMAR 13B.02.03.14)

1. Complete Table 1: Resources and Narrative Rationale. Provide finance data for the first five years of program implementation. Enter figures into each cell and provide a total for each year. Also provide a narrative rationale for each resource category. If resources have been or will be reallocated to support the proposed program, briefly discuss the sources of those funds.

Table 1: Resources					
Resources Categories	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
1. Reallocated Funds	0	0	0	0	0
2. Tuition/Fee Revenue (c+g)	116,100	170,280	232,200	309,600	309,600
a. Number of F/T Students	10	15	20	30	30
b. Annual Tuition/Fee Rate	7,740	7,740	7,740	7,740	7,740
c. Total F/T Revenue (a x b)	77,400	116,100	154,800	232,200	232,200
d. Number of P/T Students	5	7	10	10	10
e. Credit Hour Rate	645	645	645	645	645
f. Annual Credit Hour	12	12	12	12	12
g. Total P/T Revenue (d x e x f)	38,700	54,180	77,400	77,400	77,400
3. Grants, Contracts & Other External Sources	5,000	10,000	10,000	10,000	10,000
4. Other Sources	162,500	240,500	325,000	455,000	455,000
TOTAL (Add 1 – 4)	$283,600	$420,780	$567,200	$774,600	$774,600

Tuition and Fee Revenue: The MSCM degree program will be offered on both full-time and part-time basis. With 75% Resident and 25% non-resident average per credit rate is $645 for graduate courses. 12 credits for FT students and 6 credit hours per semester (12 credits per year) for PT students are considered foe the calculations in Table 1. With 1o FT and 5 PT students for the first year and a modest annual increase in FT students the tuition generation grows from $116,000 to approximately $310,000 in 5 years.

Grant, Contracts: Department is planning to raise funds and apply for internal and external grants and is anticipating a $5-10K annual support for such sources.

Other Sources: We anticipate a state subsidy of $13,000 per FTE.

2. Complete Table 2: Program Expenditures and Narrative Rationale. Provide finance data for the first five years of program implementation. Enter figures into each cell and provide a total for each year. Also provide a narrative rationale for each expenditure category.

Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	158,200	158,200	158,200	196,800	196,800
a. # FTE	1.0	1.0	1.0	1.5	1.5
b. Total Salary	113,000	113,000	113,000	123,000	123,000
c. Total Benefits	45,200	45,200	45,200	73,800	73,800
2. Admin. Staff (b + c below)	28,700	28,700	28,700	28,700	28,700
a. # FTE	0.5	0.5	0.5	0.5	0.5
b. Total Salary	20,500	20,500	20,500	20,500	20,500
c. Total Benefits	8,200	8,200	8,200	8,200	8,200
3. Support Staff (b + c below)	0	0	0	0	0
a. # FTE	0	0	0	0	0
b. Total Salary	0	0	0	0	0
c. Total Benefits	0	0	0	0	0
4. Equipment	0	0	0	0	0
5. Library	0	0	0	0	0
6. New or Renovated Space	0	0	0	0	0
7. Other Expenses	0	0	0	0	0
TOTAL (Add 1 – 7)	$186,900	$186,900	$186,900	$225,500	$225,500

One new Faculty member with support of other faculty member in the department will be able to teach all the courses in the modified curriculum. An adjunct will be needed to cover specialized and perhaps multiple section courses for year 4 and beyond. The salary for adjunct faculty is added for years 4 and 5 in the table 2.
50% of an administrative support staff's time is needed to ensure the program in being administered properly and the needs of students and faculty members in the program are met. The total expenditure for this program goes up from approximately $190,000 to $225,000 in 5 years.
This program is anticipated to be revenue generating from year 1 and generate over $500,000 starting in year 4.

M. Adequacy of Provisions for Evaluation of Program

(as outlined in COMAR 13B.02.03.15)

1. Discuss procedures for evaluating courses, faculty and student learning outcomes.

Evaluation of Courses
Course evaluation from the students occurs at the end of the semester through the University adopted "Search Light Performance Assessment." This is a questionnaire based evaluation asking the students on how the course was delivered. This is used in the evaluation of instructors for their tenure and promotion. Weaknesses and Strengths in the delivery of the course are discussed within the program and the department and opportunities for improvement are discussed and changes implemented.

Evaluation of Faculty

Evaluation of Faculty are done on two fronts: student evaluation of faculty, and peer evaluation of faculty. The purpose of both of these evaluation is to give feedback on teaching. Peer evaluations are performed by peer faculty members and provide suggestions and recommendations on improving teaching of the faculty being evaluated.

Student Learning Outcomes
The MSCM program has developed an assessment framework that is rooted within the educational objectives stated within Section G.2 of this document. These objectives serve as the springboard for the development of and assessment with a series of student performance criteria. In concert with curricular mapping, the program has developed a solid mechanism for the assessment of student learning and program outcomes.

2. Explain how the institution will evaluate the proposed program's educational effectiveness, including assessments of student learning outcomes, student retention, student and faculty satisfaction, and cost-effectiveness.

Student Learning Outcomes:

Student learning outcomes for the proposed MSCM program will be measured using the instruments identified in Section G as well as the assigned rubrics and assessment measures (e.g., competency exams/projects, case study exams) dictated by the accreditation requirements of the university's regional accreditor [i.e., Middle States Commission in Higher Education (MSCHE)] and our degree specific accrediting organization, American Council for Construction Education (ACCE).

Student Retention:

The University maintains a comprehensive student retention program under the Office of Student Success and Retention. The program assesses student retention at all levels, including the individual course, major, and degree. The Academic Advisors work with each students to create a plan to remove any barriers to success. The Academic Advisors also work with the course instructors as needed to gain additional insight that may be helpful to correcting the situation. Each student also meets with their Academic Advisor each semester to evaluate their progress toward degree completion. An updated plan of action is developed for each student for their next semester's registration and each succeeding semester through degree completion.

Morgan State University has implemented the Integrated Planning and Advising Services (IPAS) technology for its Undergraduate Programs. It is expected that such an advising service will also be offered to the students in Graduate Programs too. The initiative is known on campus as Starfish. The goals of Morgan's IPAS implementation and adoption are: 1) to increase faculty triggered early alerts; 2) to increase students' utilization of campus resources; 3) to provide seamless, transparent, and user friendly monitoring and tracking of students in high-risk cohorts; and 4) to provide one online resource where faculty, staff and students can access feedback and action plans for student success.

Student and Faculty Satisfaction:

Evaluations and assessment of Student and Faculty satisfaction occur every semester. Faculty members are evaluated every semester by students enrolled in their courses. Students are required to complete a course evaluation online within a specified time frame at the end of the semester for every enrolled course. The Department Chairs and the Program Directors review the student evaluations for every course offered at the University.

As for the faculty satisfaction of the course, Section G-3 of this document, Table 3 clearly outlines the process for implementing changes in the course based on the means of assessment used for the course. The Department Chairs and Program Directors review these assessment reports each semester. If changes are needed at the faculty level, the Department Chairs will make the changes. At the end of this cycle, an evaluation is repeated and the results are analyzed with the appropriate stakeholders regarding the effectiveness of the changes. This is an ongoing process.

N. Consistency with the State's Minority Student Achievement Goals

(as outlined in COMAR 13B.02.03.05 and in the State Plan for Postsecondary Education).

1. Discuss how the proposed program addresses minority student access & success, and the institution's cultural diversity goals and initiatives.

As the only Graduate Program in Construction Management in the State of Maryland, the program is truly vested in its mission of diversity. Ms. Tanyka M. Barber, Esq., is the Director of the Office of Diversity and Equal Employment Opportunity and the University's Title IX Coordinator. The office is charged with the day-to-day implementation of the nondiscrimination policies of Morgan State University. The major responsibilities of the Office of Diversity and Equal Employment Opportunity are to educate the institution community about affirmative action and equal employment opportunity laws, and to ensure compliance with statutory and regulatory requirements. The School of Architecture and Planning and the Construction Management Program utilize this office when necessary to ensure compliance to all applicable statutes.

Equal opportunity practices are followed and promoted within the Program, School, and University. Women and minorities are encouraged to apply for open faculty and staff positions. The student body of the Program has continually been representative of both genders and the minority representation has increased over the years.

O. Relationship to Low Productivity Programs Identified by the Commission:

1. If the proposed program is directly related to an identified low productivity program, discuss how the fiscal resources (including faculty, administration, library resources and general operating expenses) may be redistributed to this program.

The MSCM program is not categorized as a low productivity program by the commission.

P. Adequacy of Distance Education Programs

(as outlined in COMAR 13B.02.03.22C)

1. Provide affirmation and any appropriate evidence that the institution is eligible to provide Distance Education.

Morgan State University is fully eligible to provide distance education. The university has a long history of providing high-quality distance education. Morgan Online, a department within the Division of Academic Outreach and Engagement, is responsible for facilitating student enrollment in the University's online degree programs and courses. It strives to insure that students receive the highest quality instruction through the online degree programs and courses that they select.

The flexibility of courses offered online, including hybrid courses that are comprised of a mix of classroom and online instruction, allows students to continue their education, earn their degree, or enroll in workforce training and development to advance their career. Fully accredited through the Middle States Commission on Higher Education, and approved by the Maryland Higher Education Commission (MHEC), Morgan Online is committed to help each new Online/Hybrid programs achieve their goals.

Blackboard learning management system is used to deliver Morgan Online courses. Along with Panopto lecture capture and Adobe Connect, Blackboard is used to deliver 24/7 online course instruction to students worldwide. Readspeaker, DocReader, and Closed Captioning for a Panopto and Adobe Connect provide accessibility of online courses to all students.

Online faculty receive Quality Matters online and hybrid course development training. Quality Matters is a nonprofit organization dedicated to quality assurance in online education.

2. Provide assurance and any appropriate evidence that the institution complies with the C-RAC guidelines, particularly as it relates to the proposed program.

Following Council of Regional Accrediting Commissions (C-RAC) Interregional Guidelines for the Evaluation of Distance Education will be complied if any online course in MSCM are offered in the future:

1. Online learning is appropriate to the institution's mission and purposes.

"Morgan's current mission is to offer a comprehensive range of undergraduate degree programs and a select set of graduate programs to a broad cross section of students in a supportive environment that encourages research and service towards the needs of underserved communities. The vision embedded in the current plan is for Morgan to be recognized statewide and nationally for demonstrating both student access and student success in higher education. The University will also embrace innovative teaching strategies and conduct cutting-edge research in service to urban centers and underserved populations."

The above stated mission clearly aligns with online learning that will provide access to larger population otherwise not feasible through traditional methods of course delivery. Working individuals who would like to get higher education are able to use the flexibility of the online classes to fulfil their dreams.

2. The institution's plans for developing, sustaining, and, if appropriate, expanding online learning offerings are integrated into its regular planning and evaluation processes.

All programs at the University- online, hybrid, and face-to-face are subjected to the same regular planning, assessment, and evaluation processes as explained further in this section.

3. Online learning is incorporated into the institution's systems of governance and academic oversight.

All programs at the University- online, hybrid, and face-to-face are subject to the same systems of governance and academic oversight as explained further in this section.

4. Curricula for the institution's online learning offerings are coherent, cohesive, and comparable in academic rigor to programs offered in traditional instructional formats.
All Morgan Online courses are developed using the Quality Matters standards for excellence in online course design and faculty must complete course design and delivery workshops prior to teaching online. Online courses must pass internal review and processes are in place to insure that online courses meet the same rigorous curriculum requirements as traditionally delivered courses.

5. The institution evaluates the effectiveness of its online learning offerings, including the extent to which the online learning goals are achieved, and uses the results of its evaluations to enhance the attainment of the goals.

Morgan uses Certified Quality Matters Peer Reviewers to perform internal QM reviews of its online courses. Peer Reviewers must meet the Quality Matters requirements. Morgan Online provides training and incentives for reviewers.

6. Faculty responsible for delivering the online learning curricula and evaluating the students' success in achieving the online learning goals are appropriately qualified and effectively supported.

Faculty responsible for developing online learning curricula get funding from Morgan Online to support their course development. Other training for the faculty are provided through the Quality Matters for designing online course or designing blended course and MSU Teach Online. Blackboard Distance Education Templates for new online courses are provided by Learning Management System Administrators at Morgan. Morgan uses Blackboard as the learning management system for all online courses.

7. The institution provides effective student and academic services to support students enrolled in online learning offerings.

Morgan Online continuously strives to provide students with the necessary tools to succeed in all classes. Each student shall be well equipped to handle all requirements each instructor gives. The tools and resources such as listed below will be used to support the students.

- *OIT Service Desk (24/7/365)*
- *Online Tutoring (Smarthinking) (24/7)*
- *Student Technology Reference Guide*
- *Student Blackboard Instructions*
- *Counseling Center*

8. The institution provides sufficient resources to support and, if appropriate, expand its online learning offerings. Morgan is a member of Maryland Online, a consortium of MD schools that share online courses. As a member of MOL, Morgan students can take advantage of the MOL Seat Bank.

9. The institution assures the integrity of its online offerings.

Currently, Morgan delivers over 100 online courses and the following programs offered fully online:

- *Master of Science in Project Management*
- *Community College Leadership Doctoral Program*
- *Electrical & Computer Engineering 2+2 Program*
- *Master of Science in Electrical Engineering*
- *Master of Business Administration (MBA)*
- *Master of Education (MEd) "Community College Administration and Instruction"*
- *Master of Social Work (MSW)*
- *Post Baccalaureate Certificate in Sustainable Urban Communities.*

MSCM program offers several elective courses from Master of Science in Project Management which are offered both online and face-to-face delivery mode. Learning from the experiences of these programs, the MSCM program intends to follow the best practices offered by the Master of Science in Project Management as these two programs are closely aligned in their educational objectives.

Online courses offered at Morgan are developed and assessed through a rigorous process. Morgan is dedicated in providing enough resources to support its mission of providing easy access to education through its online course delivery. Morgan Online is a department within the Division of Academic Outreach and Engagement and is led by the Director, Ms. Cynthia Brown-Levist. The director ensures that the program offered through Morgan Online comply with the MHEC requirements.