Bowdoin College Library
Brunswick, Maine

OLIVER OTIS HOWARD PAPERS DIGITIZATION PROJECT: *SUMMARY*

Purpose and significance: Bowdoin College proposes to digitize the complete holdings of our Oliver Otis Howard Papers—the most heavily consulted of the Library's manuscript holdings, among its larger, and arguably its most important collection of nineteenth-century primary source materials—and to make those digital surrogates discoverable and freely available on the Web for viewing and downloading.

The O. O. Howard Papers comprise sixty (60) linear feet of manuscript material, chiefly incoming and outgoing correspondence, memoirs, and addresses created by or relating to General Oliver Otis Howard (1830-1909), a major figure in the narrative of American history, whose distinguished career mirrors many of the Nation's significant military, social, and cultural events and developments during the latter half of the nineteenth century: the Civil War; the Freedmen's Bureau and Reconstruction; Western expansion and Indian affairs; social welfare; domestic life; race relations; higher education; and religiosity. Known as the "Christian General," Howard was awarded the Medal of Honor for valor during the Civil War, served as commissioner of the Bureau of Refugees, Freedmen and Abandoned Lands, was instrumental in the founding of Howard (named in his honor) and Lincoln Memorial universities, was superintendent at West Point, and held several Western army commands, including those involving the Nez Perce War and making peace with Cochise. Aside from documenting his career, his papers also reveal his progressive commitment to the social advancement of African Americans and his strong belief in the virtues of Christian faith in effecting social change. Howard's papers thus attract a wide range of researchers and scholars in large numbers because of the breadth and depth of the documents that he accumulated over a lifetime of public service to the Nation.

Methods: The project proposes to provide free access to the fully digitized collection through the searching and viewing applications associated with the online publication of the collection finding aid, which is detailed to folder level. We will employ proven scanning and linking methods that have evolved from previous digitization projects at Bowdoin, which maximize cost effectiveness by:

1. Repurposing the existing online collection finding aid (encoded in EAD and published in HTML) to provide the descriptive metadata for each linked cluster of digital objects (each folder, and thus each cluster, will include approx. twenty items) and the hierarchical pathway for navigating online between the container listings and the digital surrogates that they describe.
2. Using existing discovery tools and search engines common to the scholarly community (e.g. MARC-based library catalogs; NUCMC and ArchiveGrid; Google) for discovery of the O.O. Howard Papers finding aid and the individual clusters of digitized documents.
3. Employing student workers and leveraging in-house expertise to produce digitized images economically but in conformance with accepted practices for quality and preservation.
4. Engaging vendor services to digitize microfilmed portions of the collection, which requires specialized equipment and expertise beyond the reach of Bowdoin's capabilities.

We project an average per scan combined cost of $2.02 per image for final Web delivery of the digitized collection.

Work Plan: Digitization will require capturing approximately 148,200 scans in three (3) years' time at a total project cost of $300,000. Aside from vendor services for digitizing previously microfilmed portions of the collection (34 35mm reels), all work will be performed in Special Collections under the immediate direction of the Project Manager, with overall supervision by the Project Director and in collaboration with an IT specialist with expertise in digital imaging, file management, preservation, and user satisfaction measures.

The Project Manager will review folders for completeness and arrangement, address preservation challenges that affect scanning, train and supervise student scanners, establish hyperlinks between

the finding aid and the corresponding digital surrogates, and conduct quality control protocols. Loose papers will be scanned on flatbed scanners; bound volumes will be scanned on a cradle planetary scanner. Image file capture will follow ALCTS "Minimum Digitization Capture Recommendations," and image clusters will be combined and resampled as PDF files for final linking to corresponding finding aid container listings. All image files will be stored on Bowdoin College networked servers that undergo daily backup and prescribed preservation protocols.

Key Project Personnel:

- Richard Lindemann, Project Director. Director, George J. Mitchell Dept. of Special Collections & Archives, Bowdoin College Library (207.725.3096; rlindema@bowdoin.edu)
- Project Manager (grant-funded; TBD)
- Andrew H. Currier, IT Consultant. Educational Technology Consultant, Information Technology, Bowdoin College (207.725.3590; acurrier@bowdoin.edu)

Products To Be Completed: The proposed project directly addresses the NHPRC's stated goal of promoting use of America's documentary heritage through cost-effective digitization. The completed project will produce: 1) a fully digital version of the O. O. Howard Papers, freely available online, providing a virtual user experience that replicates the process of a researcher's hands-on physical engagement with the collection in our reading room, and; 2) a website with information about the project and related historical resources.

Performance Objectives (3-year project):

1. Digitize the entire contents of the O.O. Howard papers by creating approximately 148,200 scans.

2. Combine and resample the scans to produce PDF clusters that match the contents of each folder.

3. Establish links in the EAD finding aid to provide online access to all of the digitized materials.

4. Achieve a production cost of $2.02 per scan.

5. Increase access to the collection by 300% based on comparison between website hits and a 3-year average of pre-project collection use transactions.

OLIVER OTIS HOWARD PAPERS DIGITIZATION PROJECT: *NARRATIVE*

Project overview and national significance: Bowdoin College's George J. Mitchell Department of Special Collections & Archives proposes to digitize the complete holdings of our Oliver Otis Howard Papers—the most heavily consulted of the library's manuscript holdings, among its larger, and arguably its most important collection of nineteenth-century primary source materials—and to make those digital surrogates discoverable and freely available on the Web for viewing and downloading. Using the existing online collection finding aid as an anchor for the digital surrogates, items will be scanned, combined at folder level in PDF files, and linked from the container listings of the finding aid to permit online viewing and downloading of the digital surrogates. Discovering and accessing the digitized material through the online finding aid will provide a virtual research experience analogous to examining the paper documents folder-by-folder in person, as occurs when scholars research the collection manually in our reading room. Digitization will require capturing approximately 148,200 scans and three (3) years' time at a total project cost of $300,000.

The O. O. Howard Papers (1833-1912 [bulk 1852-1910]) [for the finding aid (abbreviated), please see Appendix: *OOH Finding Aid*] comprise sixty (60) linear feet of manuscript material, chiefly incoming letters, bound letter-books and copy-books containing copies of outgoing correspondence, as well as draft writings (addresses, articles, memoirs, and book-length manuscripts) created by or relating to General Oliver Otis Howard (1830-1909), a major figure in the narrative of American history, whose distinguished career mirrors many of the Nation's significant military, social, and cultural events and developments during the latter half of the nineteenth century: the Civil War; the Freedmen's Bureau and Reconstruction; Western expansion and Indian affairs; social welfare; domestic life; race relations; higher education; and religiosity. Known as the "Christian General," Howard was awarded the Medal of Honor for valor during the Civil War, served as commissioner of the Bureau of Refugees, Freedmen and Abandoned Lands, was instrumental in the founding of

Howard (named in his honor) and Lincoln Memorial universities, was superintendent at West Point, and held several Western army commands, including those involving the Nez Perce War and making peace with Cochise. Aside from documenting his career, his papers also reveal his progressive commitment to the social advancement of African Americans and his strong belief in the virtues of Christian faith in effecting social change. Howard's papers thus attract numerous and wide-ranging researchers and scholars because of the breadth and depth of the documents that he accumulated over a lifetime of public service to the Nation.

The historical importance of this material, its extraordinary depth and breadth as a resource for a variety of disciplinary studies, the persistently heavy use that these papers have experienced for decades—particularly from visiting scholars—and both the size and the overall condition of the collection make the Howard Papers eminently appropriate for a large-scale digitization project of national importance. For Bowdoin, we have additional reasons for proposing the O. O. Howard Papers for digitization: 1) Howard had a longstanding and intimate association with the College as an alumnus and as an overseer; 2) the complementary papers of his brother Charles, also held by Bowdoin, have already been transcribed (by volunteers) and made available for free online viewing as an enhancement to the collection finding aid; 3) and finally, both Civil War history and Reconstruction era studies, both of which are well documented through the Howard Papers, are of increasing interest to our faculty in Bowdoin's history department and Africana Studies program.

The repository: The O. O. Howard Papers are one of many distinguished scholarly resources that Bowdoin College has acquired over a span of two centuries. Bowdoin is an independent, nonsectarian, coeducational, residential, undergraduate liberal arts institution founded in 1794. It is located in Brunswick, Maine, a town of 21,000 on the Maine coast. It is the goal of the College to engage students of uncommon promise in an intensive full-time education of their minds, exploration of their creative faculties, and development of their social and leadership abilities, in a

four-year course of study and residence that concludes with a baccalaureate degree in the liberal arts. The College, with an enrollment of approximately 1,800 students and 200 FTE faculty, offers over forty departmental and interdisciplinary majors.

The George J. Mitchell Department of Special Collections & Archives, with 3.6 FTE staff, 1.75 FTE student employees, and occasional volunteers, plays an important role in facilitating the use of primary source materials for research, in promoting the book arts, in fostering an appreciation for the need to preserve recorded information, and in serving as a resource for College history and the management of College records. We respond to approximately 2,300 reference transactions per year, with an average gate count of approximately 2,000 annual visitors. The department, named in honor of Senator George J. Mitchell (Class of 1954), contains 6,072 linear feet of rare books, 5,342 linear feet of manuscripts and College Archives, over 25,000 photographs, as well as maps, recordings, and 200 oral histories. Current acquisitions are informed by a collection development policy that is driven by "collecting to strengths," supporting the curriculum, and privileging items relating to Bowdoin and the state of Maine [for our Collection Development Policy, please see http://library.bowdoin.edu/arch/about-us/ColDevPolicy.pdf].

The manuscript collections have accumulated principally around the accomplished careers of Bowdoin's own, including the papers of several Bowdoin alumni who served in the U.S. Congress (among them, William Pitt Fessenden and Thomas Brackett Reed in the nineteenth century and Owen Brewster and George Mitchell in the twentieth). Additional manuscript collections include the papers of: O. O. Howard's brothers, Charles and Rowland; Civil War General Joshua Lawrence Chamberlain (Class of 1852 and later both governor of Maine and president of Bowdoin College); dozens of nineteenth-century Maine family papers documenting the Civil War period; and the literary works and papers of Kenneth Roberts, Robert Peter Tristram Coffin, Kate Douglas Wiggin, Elijah Kellogg, Marguerite Yourcenar, and art critic Hilton Kramer. Other Special Collections

highlights of national significance include the James Bowdoin and Benjamin Vaughan family libraries of early European and American imprints; extensive published and manuscript materials by and about Nathaniel Hawthorne and Henry Wadsworth Longfellow (both members of the Class of 1825); books, periodicals, and pamphlets of the French Revolution; rare books concerning natural history, including the double elephant-folio edition of John James Audubon's *Birds of America*; E. S. Curtis's *The North American Indian*; a broad representation of early American and early Maine imprints; the Maine Afro-American Archive (a depository for rare books, manuscripts, letters, and other works about slavery, abolitionism, and African American life in Maine); and important collections of artists' books, designer book bindings, and pop-up books. These research materials serve an important function in introducing undergraduates—in their research projects, class assignments, and other independent work—to the experience of performing original research and evaluating primary source materials. The department averages approximately thirty (30) class visits during each academic year addressing a variety of disciplinary interests ranging from contemporary printmaking to medieval French literature. Our holdings also support both faculty in their own scholarly interests and researchers from throughout the country and around the world.

Access to all of these collections is provided through MARC records (linked to finding aids where applicable) in our Library's, regional, and national catalogs and is further enhanced by descriptive information on the department's website, which includes topical resource guides as well as a menu of finding aids to the department's manuscript collections and College Archives holdings [for links to the department's Web pages, please see http://library.bowdoin.edu/arch/]. Immediately upon acquisition, all manuscript collections are accessioned (using a Microsoft Access database), and a MARC catalog record is created for each new accession. Once a collection has been processed, the catalog record is enhanced with added name and subject access points, an HTML finding aid is published online and linked from the catalog record, and the catalog record is uploaded to OCLC

for display in WorldCat and NUCMC. The finding aids appearing on the department website are indexed by various Web search engines (e.g., Google) and are harvested by ArchiveGrid for inclusion in that discovery tool.

Accessions are appraised upon arrival and assigned a processing priority. While we have a backlog of manuscript collections in need of further arrangement and description, we are not adding to that number and are gradually reducing the amount. Of our 267 single-item collections, all are processed—most of these are described through MARC records without a more detailed finding aid. Of our 314 multi-item collections, approximately 80 percent of these by quantity are fully cataloged and processed, with an HTML finding aid available online. For the remainder, 90 percent have a minimum of a draft inventory or container listing locally available in the repository.

Research value of the Howard Papers: The importance of the O. O. Howard Papers lies not only in their focus on an important nineteenth-century American, but also in documenting numerous significant historical events that engaged him during his lifetime. Howard's distinguished career attracts researchers interested in social life, religion, education, race, domestic life, the Civil War, Reconstruction and the Freedmen's Bureau, and late nineteenth-century U.S. military history (especially the Indian Wars in the West). Arranged generally in chronological order, the fifteen series in this large collection represent two broad categories of resources: correspondence and writings.

The "correspondence" is especially significant because it includes not only incoming letters, but also fifty-six letter-books and copy-books recording outgoing correspondence that Howard sent throughout his career. All but eight of the outgoing correspondence volumes have been microfilmed, and those reels are available through Interlibrary Loan. Included in these volumes of outgoing correspondence are military action reports, orders and circulars, memoranda, and other minutiae that rarely survive because of their originally ephemeral nature. Incoming correspondence includes a range of content: highly personal family letters; bureaucratic petitions and complaints;

pleas for employment; comments about fellow U.S. Army officers (including Howard's assessment of Gen. U. S. Grant); detailed accounts of many of the significant military campaigns in which Howard participated during the Civil War (Manassas, Gettysburg, Fair Oaks, and Atlanta, to name a few) and in the West (where he led a peace mission to Chochise and was involved in the Nez Perce and Bannock wars); and substantial records documenting Howard's challenges, travails, and successes as commissioner of the Freedmen's Bureau (including numerous letters from African Americans both northern and southern). Other correspondence documents Howard's role in education, especially in founding Howard University and the First Congregational Church in Washington, D.C., and Lincoln Memorial University. Among the correspondents, which include his immediate and extended family, soldiers under his command, bureaucrats, government agents, political operatives, and many near-anonymous men and women of poor or ordinary means, are more recognizable names: Henry Ward Beecher, Mary Ann Shadd Cary, Salmon P. Chase, Dorothea Dix, Frederick Douglass, William Lloyd Garrison, Elihu Root, Carl Schurz, Soujourner Truth, and Booker T. Washington.

The "writings" include manuscript (and sometimes typescript) drafts of speeches, addresses, and articles, mainly written by Howard and autobiographical in nature, and printed materials like newspaper clippings, programs, pamphlets, handbills, and reports, many either concerning him or sent to him by interested parties. The printed ephemera are particularly valuable in considering some of the religious, political, and social movements of the time and Howard's participation in such organizations as the YMCA, the Congregational Home Mission Society, the National Temperance Society, and the Republican Party.

Smaller bundles of military, personal, and financial papers (such as contracts, deeds, and materials that Howard collected for unknown reasons), and a handful of images complete the collection—the images fall outside the scope of this project since they will already have been digitized.

Scholarly use of the Howard Papers: Over the past three years (and for many years before), the O. O. Howard Papers have consistently been our most heavily requested manuscript collection [for three-year manuscript collections use, please see Appendix: *OOH Use Statistics*]. The vast majority of Howard Papers researchers are associated with institutions other than Bowdoin—many visit during the summer months or perform distant research through reference correspondence or by borrowing microfilmed portions of the collection through interlibrary loan.

Since the 1960s, when two seminal works about Howard appeared (John Carpenter's *Sword and Olive Branch* and William McFeely's *Yankee Stepfather*), we have responded to Howard reference queries in over 140 subject areas, and within the past five years we have facilitated over 200 transactions from students and scholars nationwide, both within the academy and from the general public. The papers support research disciplines ranging from political and military history to ethnic, race, and gender studies.

Projects and publications sourcing the Howard Papers have focused on a wide range of topics, including general Civil War history, the Freedmen's Bureau, religion in military service, the Nez Perce Indian Wars, Chinese education in the United States, nineteenth-century African American writers, African American health and medicine, and women's history. In the 1990s, an archeology and history scholar in southeastern Arizona used the papers to create interpretative text panels for the Coronado National Forest exploring the negotiations between Howard and Chiricahua Apache leader Cochise. In 2012, an Ohio State University graduate student began a research project on the political culture of the Union Army of the Potomac during the Civil War, particularly the XI Corps, by mining the Howard Papers, while several scholars from other institutions are currently relying heavily on the papers to support research projects in Reconstruction era medicine, Howard's differing attitudes towards African Americans and Native Americans, and a new biography. During the past decade, the O. O. Howard Papers have also provided the principle primary resource for a

variety of research projects by undergraduates and graduate students nationwide, including two Ph.D. dissertations.

Works of published scholarship over the past several decades that cite the Howard Papers include monographs on prominent political and military figures and narrower treatments alike: Eric Foner's prize-winning *Reconstruction: America's Unfinished Revolution, 1863-1877* (N.Y.: Harper & Row. 1988); Edwin Sweeney's *Cochise, Chiricahua Apache Chief* (Norman: U. of Oklahoma Press, 1991); Bruce Hampton's *Children of Grace: The Nez Perce War of 1877* (N.Y.: H. Holt, 1994); James M. McPherson and Alan Brinkley's *Days of Destiny: Crossroads in American History* (N.Y.: Dorling Kindersley, 2001); Michael Fitzgerald's *Urban Emancipation: Popular Politics in Reconstruction Mobile, 1860-1890* (Baton Rouge: LSU Press, 2002); Margaret Creighton's *The Colors of Courage: Gettysburg's Forgotten Battles* (N.Y: Basic Books, 2005); George Venn's *Soldier to Advocate: C.E.S. Wood's Diary of Alaska and the Nez Perce Conflict* (La Grande, OR: Wordcraft of Oregon, 2006); Chris Green's *The Social Life of Poetry: Appalachia, Race, and Radical Modernism* (N.Y.: Palgrave-Macmillan 2009); Elliott West's *The Last Indian War: The Nez Perce Story* (N.Y.: Oxford, 2009); Daniel Sharfstein's *The Invisible Line: Three American Families and the Secret Journey from Black to White* (N.Y.: Penguin, 2011); and most recently, Gordon Weil's *The Good Man: The Civil War's "Christian General" and His Fight for Racial Equality* (Harpswell, Me.: A. McAllister, 2013).

Despite serving as a basis for over half a century of research and scholarly publication, the O. O. Howard Papers remain a crucial resource for historical questions of national importance—if anything, the quantity of scholarship that warrants researching these papers is increasing [for testimony concerning the national importance of the Howard Papers for scholarship, please see Appendix: *Letters of Support*]. Along with that expanding interest have come heightened expectations: researchers expect to find desired primary resources online, they expect to find them easily and for free, and they expect them to be authoritative and complete. Consequently at

Bowdoin, as elsewhere, we have gravitated away from constructing websites that feature only a selection of digitized resources or superficial picture galleries and toward more comprehensive projects. Scholars require access not only to the most appealing, or the most celebrated, documents for their research—they require that all of the contents of a collection be under their gaze. With limited resources to accomplish comprehensive digitization, the Library must choose wisely and plan for the most economical and efficient digitization approaches possible—and those with the most impact—while insuring that discovery and access are reliable and unencumbered. This O. O. Howard Papers digitization project meets those desires and, through wider discovery, will cause us to broaden our audience, especially among K-12 teachers and students, who will have the opportunity to browse these historical items as digitized surrogates and appropriate them as customized learning objects in ways that the practical constraints of travel and distance have previously impeded.

Methods: The O. O. Howard Papers were acquired in 1931 as an unrestricted gift from the family, and all of the contents are in the public domain; consequently, there are no competing rights or conflicting interests with our intention to present the digitized collection online to the general public. The project proposes to provide free Web access to the fully digitized collection through the searching and viewing applications associated with the online publication of the collection finding aid, which is detailed to folder level [for the finding aid, please see Appendix: *OOH Finding Aid*]. We will employ proven scanning and encoding methods that have evolved from previous manuscript digitization projects at Bowdoin, which maximize cost effectiveness by:

1. *Repurposing the existing online collection finding aid (encoded in EAD and translated into HTML employing a style sheet) to provide the descriptive metadata for each cluster of digital objects (each folder, and thus each cluster, will include approx. 20 items).* The finding aid will also provide the structural pathway for navigating online between the container listings and the digital surrogates that they describe, and

for marking where particular bundles of digital surrogates lie within the broader organizational and hierarchical context of the papers as a whole. Although the fifteen series of O. O. Howard Papers are not inherently complex in their arrangement (which is essentially chronological or by material format), their sheer volume makes browsing them a potentially challenging task. Creating PDF clusters of digital surrogates that correlate specifically with each folder of papers will allow researchers free and fluid navigation between the digitized materials, the finding aid, and thus among all portions of the collection.

Our current practice for Web dissemination of findings aids is to generate HTML encoded instances by export of data from a back-end collections database, and then to publish the HTML finding aids to the Special Collections & Archives website using Bowdoin College's Content Management System. The published HTML finding aids are further disseminated via harvesting by OCLC's ArchiveGrid. While we have the tools and experience to generate finding aids using Encoded Archival Description (EAD 2002 Schema)—Oxygen XML editor and Archivist's Toolkit—we plan to maintain our current practice of HTML output for Web delivery due to the incompatibility of EAD XML with Web browsers. Bowdoin College is partnered with other Maine cultural heritage repositories in a pilot collaborative project (Maine Archives Collection Online [MACON]) to create a unified searchable database of EAD encoded finding aids, and we have produced a number of EAD encoded finding aids (including the O. O. Howard Papers) as pilots for ingest into the EAD MACON repository database currently in development. EAD "best practices" have been established by MACON participants, and if the MACON project moves forward as intended, EAD production will become a priority for Bowdoin.

2. *Using existing discovery tools and search engines common to the scholarly community (e.g. MARC-based library catalogs; NUCMC and ArchiveGrid; Google) for discovery of the O. O. Howard Papers finding aid and the individual clusters of digitized documents.* Each of these tools for discovery has particular advantages

and attracts different communities of users. At the same time, the development of discovery layers like Summon, which can perform single searches over multiple information databases, is dismantling the "siloed" character of these separate data sets—the Bowdoin College Library will include finding aids among the information resources that will be indexed in its Summon application.

For library catalog users, we create full MARC records (following *Describing Archives: A Content Standard* [DACS] rules) for all of our manuscript collections and include MARC field 856 for linking the catalog record with the more detailed finding aid [for a catalog entry of the O. O. Howard Papers, please see http://phebe.bowdoin.edu/record=b1442639~S1]. Creating these MARC catalog records is important because they provide for searching precision, particularly for personal names and subjects, and they integrate those search results with other relevant and related materials described in the library catalog.

Users who employ other, essentially key-word searching, discovery tools like Google and ArchiveGrid, have the advantage of a wider range of unstructured search terms. Many of our users discover our holdings, particularly our finding aids, directly from Google searching.

Regardless of the searching method, as a major consequence of this project, discovering the finding aid will result in locating and viewing the linked digitized version of the O. O. Howard Papers as well.

3. *Employing student workers and leveraging in-house expertise to produce digitized images economically but in conformance with accepted practices for quality and preservation.* Special Collections & Archives has a long and fruitful tradition of collaborating with the College's Information Technology [IT] Department in designing and producing digital projects. We have been digitizing photographs for well over a decade and providing free online access to them through our Bowdoin College Archives Image Gallery (currently using Luna Imaging, although we will soon migrate to the

Shared Shelf platform with an Omeka user interface). We have also explored various approaches to presenting digital collections online, including a "favorites" digital project centered on Joshua Lawrence Chamberlain resources. More recently, the department completed a four-year born-digital oral history project documenting the life and career of former U.S. Senate Majority Leader George J. Mitchell, which was the Oral History Association 2012 Major Project Award winner and is available through the Bowdoin Digital Commons repository. In addition, we have contracted with outside vendors to provide mass digitization of printed resources unique to Bowdoin for uploading into the Internet Archive: since 2010, we have contributed 76,000 pages to that freely available online resource.

In planning for the O. O. Howard Papers digitization project, we have developed methods, adopted standards, tested work-flows, and established metrics for cost and production based not only on previous project experience, but by digitizing in mass-production mode a sub-series of our Ralph Owen Brewster Papers and linking those digital surrogates to the Brewster Papers finding aid [please see http://library.bowdoin.edu/arch/mss/robcl.shtml#025]. We have also conducted similar testing of sample folders of loose documents from the O. O. Howard Papers. Based on those trials, we are confident that we can maintain high quality, efficient production, and low costs for the O. O. Howard Papers digitization project.

Scanning will follow the "Minimum Digitization Capture Recommendations" issued by the Association for Library Collections and Technical Services, Preservation and Reformatting Section (June 2012) [please see http://connect.ala.org/files/43293/MCTF_Draft_Recommendation.pdf]. Scanning loose papers will be accomplished on an Epson 10000XL flatbed scanner using SilverFast imaging software. Each digital file will be created at 100% image size in 400 ppi lossless TIFF format (24-bit sRGB). File naming for the resultant digital objects will reflect the hierarchy of the

processed collection to insure a direct correlation between the original items in their original order and the corresponding digital surrogates. For example, the file for the first item in the first folder of the first box of the collection will be named by combining the collection number with those filing elements: M91b01f001i001. Multi-page items, or those with writing on both recto and verso, will receive work-letter suffixes as necessary: ...r, ...v; or: ...a, ...b, ...c et cetera. Epson scanners will be recalibrated monthly using SilverFast calibration software and protocols. Scanning bound volumes (letter-books, copy-books, scrapbooks) will be accomplished either from the originals, using a Bookeye 4 cradle planetary scanner, or from existing microfilm copies (described in detail below). To provide consistency between the microfilmed volumes and those that will be digitized from the original items, to reduce digital file size, and because there is no informational value in recording the color spectrum, bound volumes will be scanned in gray scale. Each locally scanned page will be captured at 100% image size in 400 ppi lossless TIFF format (8-bit gray scale). File naming for the resultant digital objects will follow rubrics and patterns established for the processed collection to insure a direct correlation between the original volumes in their paged sequence and their digital surrogates (e.g., M91-08v1p001). The overhead scanner will be recalibrated monthly using calibration software and protocols recommended by the manufacturer.

4. *Engaging vendor services to digitize microfilmed portions of the collection, which requires specialized equipment and expertise beyond the reach of Bowdoin's capabilities.* Many of the bound volumes are fragile, either from wear and tear or because the flimsy tissue paper that comprises many of the letter-books has deteriorated. Consequently several decades ago, the department contracted with the Northeast Document Conservation Center, a leader in archival preservation practice, to make 35mm microfilm preservation copies of this material according to established archival standards for film quality and resolution. Because of the high quality of that microfilm, and due to the

deteriorating condition of the originals, we will digitize microfilmed portions of the papers from the microfilm copies. Because the microfilm appears in continuous tone black/white, the microfilmed pages will be scanned based on non-reduced original size in 300-400 ppi lossless TIFF format (8-bit gray scale) and resampled to 150 ppi for Web publication as JPEG-compressed PDF files. Bowdoin College has selected LYRASIS, a national leader in promoting and facilitating the digitization of cultural heritage materials, to provide the digitization of the 34 reels of 35 mm microfilm in the Howard Papers, and a formal work plan and quote for $8,775 to perform the work is in hand.

All scanned images will be reviewed and edited by the scanning technician using Adobe Photoshop (CS5 or later). Files will be adjusted for rotation and cropped marginally larger than the scanned object. Subsequently, by batch process using Adobe Acrobat Professional (10 or later), the TIFF files will be grouped by folder or volume and then combined and converted into optimized PDF files ("high" JPEG compression, resampled at 100 ppi, PDF/A-1b compliant [for the TIFF-to-PDF conversion procedures, please see Appendix: *TIFF-to-PDF Workflow*]) to create a viewable PDF file (approximate file size: 3.5MB) that reflects the complete contents of each manuscript folder of loose documents or complete volume. File naming for the resultant PDF files will reflect the contents and order of the original collection (e.g.: M91b01f001). By linking each combined PDF file to its corresponding listed folder heading, digital surrogates of all of the items in each folder will be available for viewing (applying the user's client browser or PDF reader), printing, and downloading. Since none of these files is text-searchable, "find" searching within the opened PDF files will not be possible.

By sampling the contents of folders in each series of the collection, we estimate that digitizing the entire collection will require approximately 148,200 scans at an average per scan cost of $2.02 per image for final Web delivery of the digitized collection [for a breakdown of scanning costs, please

see Attachment: *Budget Narrative*].

All image files created for this project will be stored on and accessed from networked College servers managed by Bowdoin College's IT department. Long term plans for the preservation and storage of the image files comprise a combination of approaches, including choice of file type, backup protocols, networked and tape storage LOCKSS redundancy, and file migration as warranted [for an Image File Preservation Plan, please see Appendix: *Image File Preservation Plan*].

Assessing the success of the Howard Papers digitization will involve multiple measures and approaches:

1. Google analytics, to understand levels of usage.
2. Link analysis, to consider how users are navigating the finding aid and associated links, and to determine how many users have added links on their own Web pages to this project.
3. Focus groups, to assess qualitative features of the digitization project and enlist suggestions for refinement and improvement.
4. Tracking scholarly outcomes, particularly effects of the project on the frequency and nature of reference transactions and collection use, and on increases in requests to publish from the collection.

Work plan: Digitization will require capturing approximately 148,200 scans and three (3) years' time at a total project cost of $300,000. Aside from vendor services for digitizing previously microfilmed portions of the collection (34 35mm reels), all work will be performed in Special Collections by Bowdoin College student employees under the immediate direction of the Project Manager, with overall supervision by the Project Director and consultation as needed with the Bowdoin College IT Consultant. After recruiting and hiring the full time Project Manager [for a position description, and for a Student Scanning Technician Position Description, please see Attachment: *Résumés and Job Descriptions*] work will proceed as follows:

1. The Project Manager, in consultation with Library and IT staff, will compile a project manual, which will provide distilled specifications for digitization capture and file creation, outlined procedures for digitization, file editing, and linking, and a detailed timeline for production goals and management tasks.
2. The Project Manager will review collection folders for physical condition and arrangement and will address preservation challenges that affect scanning (consulting with the Project Director about preservation treatments when indicated). A sampling of the collection has uncovered no significant preservation challenges for this material—those were addressed while the collection was being processed. Prior to assigning each reviewed folder to a scanning technician, the Project Manager will create and name computer folders and subfolders to provide prescribed storage locations for saving the digital scans on College servers.
3. The Project Manager will hire, train, and supervise student scanners, who will scan the entire contents of each reviewed folder using Epson 10000XL flatbed scanners and SilverFast imaging software. Each piece will be scanned by the sheet, not the page (e.g., a letter with pages 1 and 4 on the recto and pages 2-3 on the verso of a sheet of paper will require two scans, one for the recto and one for the verso). Blank sheets will not be scanned, but sheets that bear any other marking (e.g., endorsements, added notes) will be included. Insertions, attachments, and envelopes will also be scanned, in sequence, following the scanning of the primary item. The scanning technician will create a 400 ppi 24-bit color TIFF image for each piece, crop the object marginally larger than the original, and rotate the image as required—calibrated SilverFast imaging requires no further file editing (such as adjusting input levels). The completed file will then be saved on a networked server in the prescribed computer folder.
4. The Project Manager will review each computer folder once all of the required images have been saved to insure image quality and proper sequencing, and to verify that no items were

overlooked during the scanning process. Subsequently, by batch processing, all of the individual files within a computer folder will be combined, compressed, and resampled into a single PDF "use file," which the Project Manager will link to the corresponding folder heading in the online finding aid to effect public display of the digital surrogates [for the TIFF-to-PDF conversion procedures, please see Appendix: *TIFF-to-PDF Workflow*].

5. A near-identical work plan will address digitizing the bound volumes that have not been microfilmed, the differences being the use of a planetary overhead scanner rather than a flatbed scanner and digital capture in 8-bit grayscale mode. For vendor-supplied digital images from the microfilm reels, the Project Manager will perform similar quality control review, file conversion to combined PDFs, and linking as described above (section 4).
6. Once a full series of the Howard Papers has been digitized and linked, the Project Director will convene a focus group of students, scholars, and archivists to solicit critique and comment about the project results to date. Toward the completion of the project the Project Director will convene that group again for further critique and comment, and establish a monthly schedule for gathering systematic analytics to track usage and trends.

Most of the components of the work plan will be executed simultaneously throughout the duration of the project. As the contents of the collection are digitized and the image files processed into PDF-viewable surrogates, those files will be linked to the online finding, thus providing immediate access to digitized portions of the collection while the project remains a work in progress [for a month-by-month project plan, please see Appendix: *Monthly Work Plan*].

Products to be completed: The proposed project directly addresses the NHPRC's stated goal of promoting use of America's documentary heritage through cost-effective digitization. The completed project will produce a fully digital version of the Oliver Otis Howard Papers, freely available online, providing a virtual user experience that replicates the process of a researcher's

hands-on physical engagement, folder-by-folder and page-by-page, with the collection in our reading room.

The department will also create a "Subject Guide" Web page that provides information about this project and about other scholarly resources related to the O. O. Howard Papers. That site will feature links to related manuscript collections at Bowdoin and elsewhere (there are significant holdings at the Library of Congress, Howard University, and Lincoln Memorial University, among others), a bibliography, and documentation of the NHPRC funded project, including the project manual and links to publicity that completion of the project will generate. That publicity will be coordinated by Bowdoin's Office of Communications and Public Affairs, which distributes press releases to major national media as well as to more narrowly focused audiences such as scholarly societies and professional organizations. For examples with elements similar to those of the proposed subject guide, please see our "Joshua Lawrence Chamberlain Resources" [http://library.bowdoin.edu/arch/subject-guides/joshua-lawrence-chamberlain-resources.shtml] and our "About the George J. Mitchell Oral History Project" [http://library.bowdoin.edu/arch/george-j-mitchell/oral-history/] websites.

Project staff will also participate in a panel on Reconstruction era scholarly resources during a 2015 symposium sponsored by Bowdoin College.

Key project personnel:

- Richard Lindemann, Project Director. Director, George J. Mitchell Dept. of Special Collections & Archives, Bowdoin College Library (207.725.3096; rlindema@bowdoin.edu), is a librarian and archivist with over thirty years of experience in processing and preserving manuscripts and in project management. Since the mid-1990s, he has attended numerous digitization and electronic records preservation workshops and has been involved in digital projects first at the University of California, San Diego, where he designed and managed the digitization of Spanish Civil War

children's drawings [http://libraries.ucsd.edu/speccoll/tsdp/] and more recently at Bowdoin College, where he routinely supervises both photographic and text-based digitization. Between 2009 and 2012, he oversaw the award winning born-digital George J. Mitchell Oral History Project [http://digitalcommons.bowdoin.edu/mitchelloralhistory/]. He is a founding member of Bowdoin's campus-wide Digital Asset Management group, which provides guidance to the Bowdoin community for creating and retaining electronic data [for a résumé, please see Attachment: *Résumés and Job Descriptions*].

- Project Manager (grant-funded; TBD) [for a draft position description, please see Attachment: *Résumés and Job Descriptions*].
- Andrew H. Currier, IT Consultant. Educational Technology Consultant, Information Technology, Bowdoin College (207.725.3590; acurrier@bowdoin.edu) is an IT specialist with expertise in digital imaging, file management, preservation, and user satisfaction measures. He works closely with a cross section of Bowdoin faculty and staff on a wide range of projects, including digital asset management with Luna Insight and Extensis Portfolio, custom application development with a focus on data management and retrieval, and is the primary IT instructor and consultant for the Adobe Creative Suite [for a résumé, please see Attachment: *Résumés and Job Descriptions*].

Performance objectives (3-year project):

1. Digitize the entire contents of the O. O. Howard papers by creating approximately 148,200 scans.
2. Combine and resample the scans to produce PDF clusters that match the contents of each folder.
3. Establish links in the EAD finding aid to provide online access to all of the digitized materials.
4. Achieve a production cost of $2.02 per scan.
5. Increase access to the collection by 300% based on comparison between website hits and a 3-year average of pre-project collection use transactions.

Financial management: Bowdoin College has robust financial and personnel management systems in place. The College participates in annual audits by KPMG as required by the Office of Management and Budget (OMB) Circular A-133 and Government Auditing Standards and Related Information. A copy of Bowdoin's most recent audited financial statements is available upon request. Each grant and cost share is set up individually with a unique project number in our Financial Edge System to track actual expenditures for the overall project. Staff and consultants are required to complete time and effort certifications in order accurately to record the amount of time spent on the project.

OLIVER OTIS HOWARD PAPERS DIGITIZATION PROJECT: ***Proj. Mgr. Job Description***

BOWDOIN COLLEGE
JOB DESCRIPTION

JOB TITLE: O. O. Howard Digitization Project Manager **GRADE/BAND:**

DEPARTMENT: Library

REPORTS TO: Director, George J. Mitchell Dept. of Special Collections & Archives

PREPARED BY: Richard Lindemann **DATE:**

MANAGERIAL APPROVAL: Judy Montgomery **DATE:**

SENIOR OFFICER APPROVAL: **DATE:**

PURPOSE OF THE POSITION/JOB SUMMARY:
The O. O. Howard Digitization Project Manager is responsible for daily management all aspects of a three-year project, which will digitize 60 linear feet of manuscript materials documenting the life and career of Gen. Oliver Otis Howard. Duties include: training, scheduling, and supervising scanning technicians; previewing files and identifying potential problems that would interfere with scanning activities; conducting quality control measures to insure that scanning standards are met; performing file resampling and combining protocols to produce viewable PDF files; creating hypertext links that connect online lists to corresponding image files. Under the general direction of the Director of Special Collections & Archives, and in collaboration with the College Archivist and IT experts, the Project Manager also compiles regular progress reports, tracks the project budget, and adheres to file management procedures that address the long term preservation of the master digital files and conform to campus-wide IT policies and procedures.

SHIFT HOURS (indicate weekend shifts and overtime:)
0.94 FTE (37.5 hrs/week)

EDUCATION/SKILLS REQUIREMENTS: Please separate *required* vs. *preferred* education/skills

Required: Bachelor's degree or equivalent from an accredited institution; knowledge of issues related to the digitization of textual materials and image file creation; general knowledge in using HTML; exceptional skill in oral and written English language communications; demonstrated attention to detail, especially reviewing the work of others that involve repetitive tasks; demonstrated ability to work in a team environment; demonstrated ability to organize work and accomplish tasks with minimal supervision.

Preferred: formal training in handling manuscript materials; formal training in identifying paper-based preservation dangers and appropriate responses for mitigation; formal training or experience in digital preservation; demonstrated knowledge in using Adobe Photoshop and Adobe Acrobat Professional; familiarity with accepted national standards for digital capture.

EXPERIENCE REQUIREMENTS and/or EQUIVALENTS: Please separate *required* vs. *preferred* experience

Required: one year's experience in managing the work of others; experience with the process of digital capture.

Preferred: experience in managing student workers; experience in using manuscripts within a repository setting; experience in digitizing manuscripts; experience in managing, sampling, and editing image files.

OLIVER OTIS HOWARD PAPERS DIGITIZATION PROJECT: ***Scanning Tech Job Description***

[STUDENT EMPLOYEE]

Job #	
Employer	Library
Employer Type	On Campus
Category	Library
Job Type	On-Campus - Academic Year [and, On-Campus - Summer]
Job Description	Assist SC & A staff with a project to digitize manuscript materials in the George Mitchell Dept. of Special Collections and Archives.
Job Requirements	Hours must be completed during department hours, 9-5, M-F. Familiarity and comfort with scanning equipment and Adobe Photoshop software are desired, although the employee will be thoroughly trained. Must be able to follow instructions and complete tasks independently; view and read computer screens and printed materials. Close attention to detail and accuracy required. Students are required to fulfill the start and end date that is agreed to with their supervisor. The job will end at the completion of the project, but students may be hired to another H-L library job pending a positive performance review.
Hours	6.0 to 10.0 hours per week [20.0 to 40.0 hours per week during summers]
Compensation	$8.50/hour

OLIVER OTIS HOWARD PAPERS DIGITIZATION PROJECT: *TIFF-to-PDF*

TIFF to PDF Workflow

Scanned 400 dpi TIFF → 100 dpi PDF/A-1b

1. Open Adobe Acrobat Pro
2. Close any open documents
3. Edit > Preferences > Convert To PDF > TIFF > Edit Settings > Compression:
   a. Grayscale: **ZIP**
   b. Color: **ZIP**
4. Create > Combine Files into a Single PDF >
   a. File Size (page icons lower right corner): **Larger File Size** (largest icon)
   b. Add the TIFF files
   c. Click **Combine Files**
5. File > Save As > **Optimized PDF** >
   (Message: 'The PDF document needs to be saved before it can be optimized')
   a. Click **Yes**
   b. Name the file with the suffix '-archival' or similar
   c. Click **Save**
6. In the PDF Optimizer window:
   a. Settings: **100dpi-jpegmax**
      Or create the 100dpi-jpegmax preset for next time:
      Settings: Custom
      Make compatible with: **Acrobat 5.0 and later**
      Images > Image Settings
         Color Images:
            Downsample: **Bicubic Downsampling** to **100 ppi** for images above **100 ppi**
            Compression: **JPEG**, Quality: **Maximum**
         Grayscale Images:
            Downsample: **Bicubic Downsampling** to **100 ppi** for images above **100 ppi**
            Compression: **JPEG**, Quality: **Maximum**
      Save > Save current settings as: **100dpi-jpegmax**
   b. Click **OK**
7. Back in the Save Optimized As window:
   a. Name the file with the suffix '-jpegmax' or similar
   b. Click **Save**

OLIVER OTIS HOWARD PAPERS DIGITIZATION PROJECT: ***Image File Preservation Plan***

Archival Master: TIFF image. The direct digital capture images will be approximately 3400 x 4400 pixels (typically letter-sized or smaller at 400 ppi). The archive master will serve as the definitive image file for long-term sustainability. This file uses only the embedded scanner profile (which ensures no color gamut compression) and no sharpening. It is specifically designed to ensure no image quality loss and is ideal for future migration to other color spaces and formats.

Online Electronic Deliverable: PDF/A-1b file comprised of multiple archival master bitmaps, one per page, each downsampled to 100 ppi and stored in JPEG format at a "high" quality setting, no less than 9 on a 12 point scale.

Storage: Bowdoin's Information Technology [IT] division will provide sufficient network storage space for the consistent backup of all files. All images will be protected via a backup schedule that ensures data protection for disaster recovery with a recovery point objective (RPO) of 1 day. Back-ups will be managed via EMC Networker software in conjunction with a Qualstar TLS-58132 library that resides outside the primary datacenter where the storage system resides. Data will be written to LTO-5 tape and moved off-site at regular intervals to a 4-hour data rated fireproof vault (Bowdoin has two off-site areas in the Brunswick, Maine, vicinity). This does not mean all images are backed up every day, but all images that have changed or are new will be protected. Full backups with a long-term retention can be implemented as needed. For future retrieval of large file images from off-site tape backup, the Library will make a request directly to the College's IT Department.

Bowdoin stores image files on a network-attached storage [NAS] system that currently has 125TB of online disk that services the campus. The storage system is capable of storing 672TB. The NAS with built-in redundancy is updated approximately every five years by adding additional capacity, capability, and redundancy. At this time, no archival system is in place, but when an archival system is implemented, it will allow for self-service retrieval of data.

OLIVER OTIS HOWARD PAPERS DIGITIZATION PROJECT: *MONTHLY WORK PLAN (3-year project)*

Year One:

[One month prior]	Recruit and hire Proj. Mgr.	
Month 1	Draft procedures manual Procure office equipment Procure planetary scanner Hire and train student scanners Review papers, scan items, perform q.c., combine files, and create links	
Month 2-3	Review papers, scan items, perform q.c., combine files, and create links Create "About the Project" Web page	
Month 4	Conduct formal 3-month performance review of Proj. Mgr. Review papers, scan items, perform q.c., combine files, and create links	
Month 5-6	Review papers, scan items, perform q.c., combine files, and create links	6-month production goal: 19,650 scans completed
Month 7	Conduct formal 6-month performance review of Proj. Mgr. Convene focus group to critique results to date Produce formal 6-month progress report Engage LYRASIS to digitize microfilm Review papers, scan items, perform q.c., combine files, and create links	
Month 8-12	Review papers, scan items, perform q.c., combine files, and create links	12-month production goal: 39,300 scans completed (+ 30,260 microfilm scans completed)

Year Two:

Month 1	Produce formal to-date progress report Review papers, scan items, perform q.c., combine files, and create links	
Month 2-6	Review papers, scan items, perform q.c., combine files, and create links	18-month production goal: 58,950 scans completed
Month 7	Conduct formal annual performance review of Proj. Mgr. Produce formal to-date progress report Review papers, scan items, perform q.c., combine files, and create links	
Month 8-12	Review papers, scan items, perform q.c., combine files, and create links	24-month production goal: 78,600 scans completed

Year Three:

Month 1	Produce formal to-date progress report Review papers, scan items, perform q.c., combine files, and create links	
Month 2-6	Review papers, scan items, perform q.c., combine files, and create links	30-month production goal: 98,250 scans completed
Month 7	Conduct formal annual performance review of Proj. Mgr. Produce formal to-date progress report Convene focus group to critique results to date Review papers, scan items, perform q.c., combine files, and create links	
Month 8-11	Review papers, scan items, perform q.c., combine files, and create links	
Month 12	Review papers, scan items, perform q.c., combine files, and create links Complete final report	36-month production goal: 117,940 scans completed (+ plus 30,260 microfilm scans completed) = 148,200 scans completed