

**DORMITORY AUTHORITY OF THE STATE OF NEW YORK
STATE ENVIRONMENTAL QUALITY REVIEW
FINDINGS STATEMENT**

Pursuant to the *State Environmental Quality Review Act* (“SEQRA”), codified at Article 8 of the *New York Environmental Conservation Law* (“ECL”), and its implementing regulations, promulgated at Part 617 of Title 6 of the *New York Codes, Rules and Regulations* (“N.Y.C.R.R.”), which collectively contain the requirements for the *State Environmental Quality Review* (“SEQR”) process, the Dormitory Authority of the State of New York (“DASNY”), as an involved agency, makes the following findings.

Date: March 9, 2015

Title of Action: Columbia University
Continuation of Phase 1 Components of the Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development Project (Columbia University 2015 Financing Project)

Description of Proposed Action and Proposed Project

The Dormitory Authority State of New York (“DASNY”) has been requested by Columbia University (“Columbia” or the “University”) to provide funding for the *Continuation of Phase 1 Components of the Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development Project* (“the Proposed Project”). For the purposes of SEQR, the Proposed Action would consist of DASNY’s authorization of the issuance of one or more series of fixed-and/or variable-rate, tax-exempt and/or taxable bonds pursuant to DASNY’s Independent Colleges and Universities Program in an estimated aggregate principal amount not to exceed \$300,000,000, to be sold through one or more negotiated offerings and/or private placements at one or more times on behalf of Columbia. The proceeds of the bond issuance would be used, in part, to finance certain components of the *Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development Project*, as described in this *Findings Statement*. The bond issuance would also be used to finance various University-wide construction and renovation projects located on Columbia’s Morningside Campus and Medical Center Campus, as well as to fully or partially refinance the University’s commercial paper that was used to refund DASNY’s Columbia University Insured Revenue Bonds, Series 2004B.

The *Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development Project* would facilitate the development of a new academic campus in an approximately 35-acre area (the “Project Area”) of Manhattanville in the West Harlem section of the borough of Manhattan. The rezoning of the Project Area, which was approved by the New York City Planning Commission (“CPC”) on November 26, 2007, and by the New York City Council on December 19, 2007,¹ created the Special Manhattanville Mixed-Use Zoning District (“MMU”), thereby facilitating Columbia’s development of an Academic Mixed-Use Plan (the “Academic Mixed-Use Development”) on approximately 17 acres (the “Academic Mixed-Use Area”) within the 35-acre Project Area, as well as commercial and residential development in other portions of the Project Area.² The Academic Mixed-Use Development, as approved, will total approximately 6.8 million gross square feet (“gsf”) above and below ground. This development will consist primarily of community facility uses serving the University, with street-level retail and other active ground-floor uses. The remaining 18 acres within the Project Area will consist of 9 acres located primarily between Twelfth Avenue and Marginal Street and east of Broadway (which are estimated to result in another 329,500 gsf of commercial and residential development); and 9 acres between Marginal Street and the pierhead line, of which 2 acres comprise the area of the new West Harlem Waterfront park and 7 acres comprise city-owned land under water. This land under water cannot be developed, nor can it generate development rights transferable to other parcels. The rezoning will result in an estimated 7.1 million gsf of development.

The Academic Mixed-Use Development is anticipated to take place incrementally over approximately 25 years. The first phase of the development will include the construction of an underground Central Energy Plant to provide heating and cooling for much of the new campus, a multi-level, interconnected underground space referred to as the Central Below Grade Facility to support the above-ground buildings, the Jerome L. Greene Science Center for Columbia’s Mind, Brain, and Behavior Initiative (the “Jerome L. Greene Science Center”), the Business School, the School of the Arts (the “Lenfest Center for the Arts”), an academic support building (the “University Forum” or “Bowtie Building”), the School of International and Public Affairs (“SIPA”), University housing, and publicly-accessible open space. Phase 1 construction will

¹ CPC Resolutions №. C070495ZMM and №. N 070496 ZRM and City Council Resolutions №. 1201-2007 and №. 1202-2007.

² In addition to the rezoning, implementation of the Academic Mixed-Use Development Plan entailed the adoption of a General Project Plan (“GPP”) by the Empire State Development Corporation (“ESDC”) to provide for implementation of features that may not have been mandated through zoning regulations or other mechanisms, such as permitted uses in below-grade spaces, specification of the allowable uses on each proposed development site within the range permitted by zoning, minimum and maximum floor area thresholds for all land use components (academic research, academic, university housing, retail and recreation), and preservation of specified historic resources. The GPP also authorized the subsequent acquisition of property within the Academic Mixed-Use Area by ESDC through the exercise of ESDC’s power of eminent domain or otherwise under the New York State Urban Development Corporation Act (“UDC Act”) and the subsequent disposition by ESDC of any such property to Columbia for purposes of project development. To the extent that acquisition of non-Columbia owned or controlled above-grade parcels through eminent domain was necessary and such authority was exercised by ESDC, such acquisition by ESDC will be in stages based on Columbia’s reasonably anticipated needs for the property as the Academic Mixed Use Area is developed. Development of the Academic Mixed Use Area contemplated ESDC acquisition of below-grade areas under West 130th, West 131st, and West 132nd Streets and adjacent streets (for tie-backs and other structural supports) to facilitate construction of a continuous central below-grade space. The streets will remain mapped and fully open to the public at grade.

occur on the three blocks between West 125th Street and West 131st Streets and Broadway and Twelfth Avenue. The first Phase 1 activities, which commenced in 2010, involved the abatement of asbestos and other hazardous materials within existing buildings and demolition of above-grade structures on the blocks bounded by West 125th and West 129th Streets, West 129th Street and West 130th Street, and West 130th Street and West 131st Street. Portions of the block bounded by West 131st Street and West 132nd Streets will also be abated and demolished as part of Phase 1. Following abatement and demolition on these blocks, a slurry wall was constructed to enclose the two blocks from the north side of West 129th Street to the south side of West 131st Street, and the soil was excavated to allow for below- and above-grade construction.

The Phase 1 above-grade buildings will include the Jerome L. Greene Science Center along Broadway and two academic buildings (the Columbia School of Business and the Lenfest Center for the Arts) plus an approximately 11,800-gsf landscaped open space (the “Small Square”) adjacent to the west. To the south, the University Forum (Bowtie Building) plus a small triangle of open space (the “Grove”) located on a parcel between West 129th Street and West 125th Streets at Broadway and, to the north, the mixed-use academic SIPA and University housing buildings on Twelfth Avenue and West 130th Street will also be constructed during Phase 1. Properties on the block between West 131st Street and West 132nd Street will be used to support the Phase 1 construction activities with land for staging of construction materials and equipment and other construction support. Columbia will also use properties it currently owns north of West 131st Street for interim parking. Construction of Phase 2 of the Academic Mixed-Use Development Project will generally include the blocks north of West 131st Street, as well as the above-grade construction on the block south of West 131st Street.

The following components of the Manhattanville Academic Mixed-Use Development Project would be included in the DASNY *Columbia University 2015 Financing Project*:

- Construction of all systems required to complete the Jerome L. Greene Science Center;
- Construction and equipping of the Central Energy Plant and construction of the foundations, slurry wall and other structural systems associated with the development of the Central Below-Grade Facility to serve and support the Jerome L. Greene Science Center;
- Construction of the Lenfest Center for the Arts;
- Construction of the University Forum (Bowtie Building); and
- Construction of open space, comprising plazas, streetscapes and green spaces throughout the Manhattanville campus.

Jerome L. Greene Science Center. Columbia University envisions a new academic campus that will provide space for researchers to work on global issues. In support of that endeavor, the University is constructing the Jerome L. Greene Science Center, a major academic research facility for interdisciplinary neuroscience research that will have both educational and clinical programs. The Jerome L. Greene Science Center will be led by the renowned neurobiologist Dr. Thomas Jessell, and Nobel laureates Dr. Richard Axel and Dr. Eric Kandel

and will include laboratories in which the University's scientists will explore the causal relationship between gene function, brain wiring, and behavior, research which will have implications for the treatment of brain illness — probing the root causes of neurodegenerative diseases, such as Parkinson's and Alzheimer's, and motor neuron diseases, among others — and which will also assist in decoding disorders of mood and motivation, cognition and behavior, such as autism, dementia and schizophrenia. The Center will establish an educational outreach facility and clinical programs with a focus on childhood developmental disorders and diseases of the aging brain.

The Jerome L. Greene Science Center will provide facilities for 9 to 10 principal investigators on each of its eight research floors. Each of the principal investigators will need 10 to 12 researchers with an average space requirement per team of approximately 3,500 gsf, resulting in the need for a floor plate of between 35,000 and 40,000 gsf. The building is currently under construction and is anticipated to be completed in 2016.

Central Energy Plant and Central Below-Grade Facility. The Academic Mixed-Use Development will have an extensive below-grade component (referred to as the “Central Below-Grade Facility”) to provide contiguous support space, including, but not limited to, central energy plants to provide heating, ventilation, and air conditioning (“HVAC”) to all but one of the proposed buildings west of Broadway, academic research support facilities, parking and loading facilities, storage space, and recreational facilities. Two central energy plants serving the Academic Mixed-Use Development will be constructed. The Phase 1 Central Energy Plant proposed at West 129th Street adjacent to the Jerome L. Greene Science Center will serve all of the development south of West 132nd Street. The Phase 2 Central Energy Plant proposed at West 133rd Street and Twelfth Avenue will serve the remaining development in the Project Area.

The proposed Phase 1 Central Energy Plant's large boilers will operate more efficiently than would individual boilers in each of the proposed buildings of the Academic Mixed-Use Development. Additionally, the boilers will use less fuel and produce proportionally lower air pollutant emissions than the sum of the smaller boilers. Also, larger boilers associated with central energy systems will offer better environmental performance compared with smaller boiler systems, since the larger systems must be designed to meet more stringent federal, state, and local regulatory requirements. The Phase 1 Central Energy Plant is currently under construction and is anticipated to be completed in 2016.

The Central Below-Grade Facility will be a multilevel, interconnected underground space that will connect West 130th Street, West 131st Street and West 132nd Street between Broadway on the east and 12th Avenue on the west. Given the shallow ground water elevation in the area, the Central Below-Grade Facility will be enclosed by a slurry wall and foundation slab that will serve as a water barrier or “bathtub.” Excavation for the Central Below-Grade Facility will be at a depth ranging from approximately 70 to 80 feet below grade, with slurry walls built extending from the existing grade to a depth ranging from less than 50 feet to approximately 120 feet below grade or more (depending on geological conditions). The Central Below-Grade Facility is

currently under construction and parts of it are anticipated to be completed in 2016 to support the Phase 1 buildings currently under development.

Lenfest Center for the Arts. The Lenfest Center for the Arts will be located between the Jerome L. Greene Science Center and the School of Business building on the block bounded by West 125th Street and West 129th Street on the south, 130th Street on the north, 12th Avenue on the west and Broadway on the east. The approximately 54,000-gsf building will house programs for the School of the Arts and the Wallach Gallery. The Lenfest Center for the Arts is currently under construction and is anticipated to be completed in 2016.

University Forum (Bowtie Building). The new University Forum will be located on the triangular shaped block bounded by West 125th Street, West 129th Street and Broadway. The approximately 65,000-gsf building will house an academic conference facility for the University including a 450 seat auditorium, conference rooms, faculty offices, and support spaces as well as program areas to support the conference center. The University Forum is anticipated to be completed in 2018.

Open Space. Approximately 93,965 gsf of publicly-accessible open space comprising a series of plazas, streetscapes, and green spaces will be constructed as part of the University's campus expansion in Manhattanville. The Phase 1 open areas will include an approximately 11,800-gsf landscaped open space (the "Small Square") on the block between Broadway, 12th Avenue, and West 129th and West 130th Streets; a small triangle of open space (the "Grove") at the western tip of the triangular-shaped block formed by the intersections of Broadway, West 125th Street, and West 129th Street; and midblock open areas that will also serve as pedestrian passageways through the midblocks. A large through-block central open space (the "Square") of approximately 40,000 gsf will also be located between West 130th and West 131st Streets. The design and development of the landscapes and open spaces within the Manhattanville campus will provide critical linkages between buildings within the campus and surrounding community. The Phase 1 open spaces are anticipated to be completed in 2017.

The construction required in connection with Phase 1 of the Academic Mixed-Use Development is described in detail in Chapter 21, "Construction," of the *Final Environmental Impact Statement ("FEIS")* for the *Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development Project* (dated November 16, 2007) prepared by AKRF, Inc. on behalf of Columbia. The *FEIS*, which was reviewed and approved by the New York City Planning Commission ("CPC") on November 26, 2007 (Resolution No. C070495ZMM and No. N 070496 ZRM) and by the New York City Council on December 19, 2007 (Resolution No. 1201-2007 and No. 1202-2007), covered the entire *Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development Project*. However, only the project components that would be financed by DASNY with the proceeds of the 2015 Bond Series are discussed in detail in this *Findings Statement*.³ This approach is consistent with the findings procedure in the *SEQR* regulations,

which allows each involved agency to consider the relevant environmental factors presented in the *FEIS*, as well as balance and weigh essential considerations, including the economic and social factors, in reaching its decision on its underlying jurisdiction.

The components of the Proposed Project that would involve various University-wide construction and renovation projects located on Columbia's Morningside Campus and Medical Center Campus, and the full and/or partial refunding of the DASNY's Columbia University Insured Revenue Bonds, Series 2004B were not part of the *FEIS* process. However, DASNY has determined these actions, which would involve maintenance or repair involving no substantial changes in an existing structure or facility; the replacement, rehabilitation, or reconstruction of a structure or facility, in kind, on the same site, including upgrading buildings to meet building or fire codes; the refunding of existing debt; and the purchase of furnishings, equipment and supplies, are Type II actions as specifically designated by 6 *N.Y.C.R.R.* § 617.5(c)(1), 6 *N.Y.C.R.R.* § 617.5(c)(2), 6 *N.Y.C.R.R.* § 617.5(c)(23), and 6 *N.Y.C.R.R.* § 617.5(c)(25), respectively. Type II "actions have been determined not to have a significant impact on the environment or are otherwise precluded from environmental review under *ECL*, Article 8."⁴ Therefore, no further *SEQR* determination or procedure is required for any project component identified as Type II (see attached *Columbia University 2015 Financing Project Type II SEQR Memorandum*, dated March 9, 2015).

Location of Proposed Project

The Project Area for Columbia's Academic Mixed-Use Development is generally bounded by West 133rd Street and West 135th Street to the north, West 125th Street and St. Clair Place to the south, Broadway and Old Broadway to the east, and the Hudson River to the west. The Phase 1 construction/development area is generally bound between West 125th Street and West 131st Street, between Broadway and Twelfth Avenue. The Jerome L. Greene Science Center site is located on the east end of the block between West 125th Street/West 129th Street and West 130th Street from Broadway to Twelfth Avenue. The Phase 1 Central Energy Plant site is located below ground at West 129th Street adjacent to the Jerome L. Greene Science Center. The Central Below-Grade Facility is bounded by Broadway on the east, West 125th Street and West 129th Street on the south, 12th Avenue on the west and West 131st Street on the north. The Lenfest Center for the Arts site is located mid-block between West 125th Street and West 129th Street. The University Forum site is located on the triangular-shaped block bounded by West 125th Street, West 129th Street and Broadway. The Phase 1 open areas will be located on the block between Broadway, 12th Avenue, West 129th Street and West 130th Street (the Small Square); at the western tip of the triangular-shaped block formed by the intersections of Broadway, West 125th Street, and West 129th Street (the Grove); and on a large through-block central open space between West 130th and West 131st Streets (the Square).

³ Certain projects included in this *Columbia University 2015 Financing Project* were previously reviewed under *SEQRA* as part of the *Columbia University 2011 Financing Project* and *2012 Financing Project*. The bond proceeds from those earlier issuances were not fully used for the projects at that time.

⁴ 6 *N.Y.C.R.R.* § 617.5(a).

DASNY Jurisdiction: Authorization of the Issuance of Bond Proceeds
(*\$300,000,000 Dormitory Authority State of New York
Columbia University Revenue Bonds, Series 2015*)

Lead Agency: New York City Planning Commission
22 Reade Street
New York, New York 10007

Date FEIS Filed: November 16, 2007

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Facts and Conclusions in the FEIS Relied Upon to Support the Findings

Purpose and Need for the Proposed Project

1. Columbia University has been an independent institution of higher education in New York City since its founding in 1754. Its main campus, located in Morningside Heights along Broadway between West 114th Street and West 120th Street, contains the University's undergraduate colleges, academic and professional graduate schools, libraries, University administration, and student housing. The Columbia University Medical Center ("CUUCM"), located in the Washington Heights neighborhood, contains the medical, dental, nursing and public health schools, and several areas of medical research, as well as the affiliated New York Presbyterian Hospital. The University's stadium and sports facilities are located at Baker Field at the northern tip of Manhattan on the Harlem River. The University also operates the Lamont-Doherty Earth Observatory in Palisades, New York, and Nevis Laboratories in Irvington, New York. Columbia has approximately 29,000 students and employs approximately 4,500 full- and part-time faculty. With more than 11,000 employees as of 2013, Columbia is one of the largest nongovernmental employers in New York City.⁵
2. Columbia has determined that it faces a critical need for new, modern, state-of-the-art facilities to maintain its presence in New York City and its position as a leading university. Many of its existing facilities are old, and many of its academic and academic research spaces are inadequate to accommodate new demands in the affected disciplines. In recent years, Columbia has renovated and expanded existing buildings, replaced buildings, filled in the remaining spaces on its campuses where development is feasible, and acquired and built on properties near its campuses when they have become available. However, these efforts have not met the space requirements identified by the University, particularly the need to grow in emerging academic and academic research fields. Assuming current trends continue, Columbia has estimated it will need 5 to 6 million gsf of program space over the next 20 years. The need for growth has been precipitated by major changes in academic disciplines and academic research fields, including an increased focus on interdisciplinary approaches, as well as the advent of new technologies. Without modern facilities for these fields and disciplines, Columbia believes that it will be unable to continue to attract top-ranked faculty and, thus, top-ranked students to the University.
3. Columbia has identified several programs with immediate space needs, including the Jerome L. Greene Science Center, the School of Business, SIPA, and portions of the School of the Arts. Other academic and research programs identified by Columbia as currently working in inadequate space and/or in need of larger space include biomedical engineering; environmental sciences; nanotechnology; neuroscience; systems biology;

⁵ <http://www.columbia.edu/cu/opir/facts/FACTS20133-2.pdf>

architecture, planning and preservation; astronomy; astrophysics; biological sciences; ecology, evolution and environmental biology; economics; English; political science; psychology; and new interdisciplinary initiatives of the CUMC.

4. In planning for expansion to accommodate academic research and academic programs, Columbia seeks to develop modern, state-of-the-art facilities. Academic research facilities today require more space, design flexibility, and larger floor plates than their predecessors. In this regard, Columbia has identified simple, rectangular-shaped floor plates of at least 25,000 gsf, to accommodate 8 to 10 research teams per floor, and with at least 250,000 gsf of program space, as minimum requirements for an academic research building. These minimums may have to be increased for specific types of research, such as for the interdisciplinary neuroscience program planned for the Jerome L. Greene Science Center. Modern academic research buildings must also accommodate large amounts of support space for research functions (e.g., imaging suites and gene sequencing equipment), in a proportion of research support space to lab space, which approaches a ratio of 1:1. Modern academic buildings also need relatively large floor plates, and Columbia has identified a minimum floor plate of approximately 15,000 gsf as its planning standard for this type of facility.
5. In the past decade Columbia has undertaken new construction and the adaptive reuse of a number of buildings in order to enable the expansion of programs. However, this construction program included only three new buildings with floor areas of more than 150,000 gsf, and one large adaptive reuse. None of the sites provided an opportunity to relocate large academic programs such as the School of Business or SIPA, and only two sites on the CUMC campus provided significant additional laboratory space. The university has three sites remaining at the existing Columbia campuses or on University-owned, off-campus properties that could approximate the building sizes and layouts needed for modern academic research or major graduate academic buildings; taken together, these sites could accommodate 670,000 gsf. The University has determined that ten other smaller sites could accommodate approximately 549,000 gsf in total; however, these sites are not appropriate for major facilities and are planned by the University to be developed for housing or small academic institutes or centers.
6. In considering its options to accommodate its long-term space needs, the University previously considered the possible use of vacant land at the southern end of the Riverside South development area, a large-scale mixed-use project being built between West 59th Street and West 72nd Street west of West End Avenue. Riverside South could have provided approximately half the floor area — up to 2.6 million gsf of development on 9 acres between West 59th Street and West 62nd Street west of West End Avenue — sought by the University. In addition to its limited size, the University concluded that the substantial distance from Riverside South to the Morningside Heights campus and CUMC made this site less desirable. The University has also evaluated options for use of its facilities outside New York City. Development at these locations would be distant from Manhattan, would not provide proximity to Columbia's campuses, and would not

meet Columbia's stated goal to stay and expand in New York City. In addition, the outlying campuses provide limited development opportunities and have been used for specialized research facilities that do not require large buildings.

7. Columbia has determined that it has largely exhausted opportunities to meet space needs on its existing campuses and on properties that it owns nearby. In accommodating long-term growth over the next several decades, the University wishes to avoid reliance on ad hoc acquisitions of property, as was done in the area surrounding the Morningside Heights campus, and to instead engage in the systematic, long-range planning and development of integrated facilities. Columbia has determined that this is particularly necessary because the trends in academia toward coordination among programs and interdisciplinary education require an integrated campus setting, which could not be accommodated through ad hoc acquisitions. The amount of space that Columbia needs makes the prospect of acquiring it in an ad hoc manner extremely difficult. Moreover, the outcome of ad hoc expansion would be a miscellaneous collection of University buildings scattered in several urban neighborhoods and lacking a cohesive identity. There would be little or no connection among them, as there would be if the expansion took place in one area, creating a new integrated, modern, urban, and open campus.
8. Columbia has determined that expansion in Manhattanville would address its critical need for new facilities for these principal reasons: (1) adequate land to accommodate Columbia's long-term space needs; (2) enough land to create integrated University facilities, which could stimulate the intellectual achievements of the students and faculties of several graduate schools and programs, as well as provide open space and other amenities as part of an open campus environment; (3) an area large enough to benefit from and make cost-effective a continuous, deep, below-grade space that would provide efficient shared facilities, including academic research support facilities, classrooms and auditoriums, centralized loading and distribution systems, centralized mechanical systems (energy centers), and parking that meets anticipated demand; (4) location and proximity to the Morningside Heights campus and the Medical Center; (5) the prospect of improving Columbia's existing connection to West Harlem by providing greater access to and through the new campus and building new and enhancing existing partnerships with the community; and (6) the opportunity to transform an aging, former manufacturing area into a vibrant, mixed-use development. The development of new graduate facilities in Manhattanville will also allow Columbia to reorganize space at the Morningside Heights campus so that programs there can expand into space vacated by moving graduate programs to Manhattanville.
9. Columbia believes that physical proximity of facilities in a campus setting is the best way to promote integration of disciplines and interaction among the faculty and students, and thus create a learning community. An interchange of ideas among various intellectual disciplines is greatly facilitated by having several schools in one place, and it is key to the accomplishments of the University's faculty, graduates, and students. A campus setting

also makes possible the planned provision of open space and other amenities that benefit faculty, students, and neighborhood residents alike.

State Environmental Quality Review Process

10. The CPC, as Lead Agency, conducted a coordinated environmental review of the Proposed Project pursuant to the *SEQRA*, codified at Article 8 of the *ECL*, and its implementing regulations (6 *N.Y.C.R.R.* Part 617), which collectively contain the requirements for the *SEQR* process. The Proposed Project was also reviewed pursuant to the *City Environmental Quality Review* (“*CEQR*”) Rules of Procedure of 1991 and Executive Order №. 91 of 1977. The *City Environmental Quality Review* (“*CEQR*”) *Technical Manual*⁶ generally served as a guide with respect to environmental analysis methodologies and impact criteria for evaluating the effects of the Proposed Project.
11. A *Positive Declaration* and a *Draft Scope of Work for the Draft Environmental Impact Statement* (“*DEIS*”) were issued on October 3, 2005. On November 15, 2005, a public scoping meeting was held on the *DEIS*. A *Final Scope of Work*, reflecting the comments made during the scoping meeting, was issued on April 25, 2007.
12. Pursuant to the city’s *CEQR* procedures, the University’s proposed development required discretionary approval by the CPC in accordance with the New York City’s *Uniform Land Use Review Procedure* (“*ULURP*”). As such, on May 30, 2007, Columbia University filed the following applications for *ULURP* review: (1) an amendment to the Zoning Map, Section Nos. 5c and 6a, to rezone M1-1, M1-2, M2-3 and M3-1 districts to C6-1, C6-2, and R8A/C1-4 Districts, within the proposed Special Manhattanville Mixed-Use District (*ULURP* Application №. C 070495 ZMM); and (2) an amendment to the Zoning Text to establish the Special Manhattanville Mixed Use District (*ULURP* Application №. N 070496 ZRM).
13. The applicant prepared a *DEIS* and a *Notice of Completion for a DEIS* was issued on June 15, 2007. On October 3, 2007, the CPC held a public hearing on the *DEIS* pursuant to *SEQRA* and *CEQR*.
14. The *ULURP* applications (№. C 070495 ZMM and №. N 070496 ZRM), were certified as complete by the New York City Department of City Planning (“*NYCDCP*”) on June 18, 2007, and were duly referred to Community Board 9 and the Borough President, in accordance with Title 62 of the Rules of the City of New York, Section 2-02(b). Community Board 9 held a public hearing on this application on August 20, 2007, and on that date, by a vote of 32 to 2 with 1 abstention, adopted a resolution recommending disapproval of the application with conditions. The applications were considered by the Borough President, who issued a recommendation for conditional approval on September

⁶ The City of New York, Mayor’s Office of Environmental Coordination, *City Environmental Quality Review Technical Manual*, May 2010.

- 26, 2007. A summary of the Borough President's recommendation appears in the report on the related application for the proposed amendment to the *Zoning Resolution* to establish the Special Manhattanville Mixed Use District (N 070496 ZRM).
15. The Proposed Project (ULURP application №. C 070495 ZMM and №. N 070496 ZRM) was also reviewed by the New York City Department of City Planning ("NYCDCP") for consistency with the policies of the New York City Waterfront Revitalization Program ("WRP"), as amended, approved by the New York City Council on October 13, 1999 and by the New York State Department of State on May 28, 2002, pursuant to the New York State Waterfront Revitalization and Coastal Resources Act of 1981 (the "Waterfront Act") (New York State Executive Law, Section 910 et seq.). The designated WRP number is 06-043. The Proposed Project was determined to be consistent with the policies of the WRP.
 16. A *Final Environmental Impact Statement* ("FEIS") was completed and a *Notice of Completion for a FEIS* was issued on November 16, 2007, by the CPC, pursuant to both *SEQRA* and *CEQR*. The *FEIS* identified significant adverse impacts and proposed mitigation measures that are summarized in the Executive Summary of the *FEIS* attached as Exhibit A to the report for application N 070496 ZRM. On November 26, 2007, a *Technical Memorandum* ("*FEIS Memo*") describing and analyzing other modifications to the Proposed Actions was issued. Both the *FEIS* and the *FEIS Memo* concluded that the Proposed Actions with the modifications would not result in any new or different significant adverse environmental impacts not already identified in the *FEIS*.
 17. On November 26, 2007, the CPC, as Lead Agency, issued a *Findings Statement* that determined that the requirements of 6 *N.Y.C.R.R.* Part 617 of *SEQRA* had been met and that, consistent with social, economic, and other essential considerations from among reasonable alternatives thereto, the approved actions were ones that avoided or minimized adverse environmental impacts to the maximum extent practicable. The CPC's *Findings Statement* also determined that adverse environmental impacts disclosed in the *FEIS* and *FEIS Memo* would be minimized or avoided to the maximum extent practicable by incorporating as conditions to the approval, pursuant to an *Interim Restrictive Declaration* ("Interim Declaration") dated November 26, 2007, the identified mitigation measures. The CPC adopted resolutions approving Columbia University's *ULURP* application №. C070495ZMM and №. N070496ZRM on November 26, 2007 (Calendar №. 1 and №. 2, respectively). (Note: At the time of the original *SEQRA/CEQR* process, DASNY participated as an interested agency because Columbia had not yet formally requested funding from DASNY.)
 18. On December 19, 2007, the New York City Council, having considered the *FEIS* and relevant environmental issues, passed Resolution №. 1201-2007 granting approval of the CPC's decision to adopt Columbia University's *ULURP* application №. C070495ZMM for a Zoning Map change and Resolution №. 1202-2007 granting approval of the CPC's decision to adopt Columbia University's *ULURP* application №. N070496ZRM for an

amendment to the text of the Zoning Resolution of the City of New York, concerning Article X, Chapter 4 (Special Manhattanville Mixed Use District).

19. In October 2010, DASNY received a funding application from Columbia for its *2011 Financing Project*. The proposed action consisted of DASNY's authorization of the issuance of one or more series of fixed- and/or variable-rate Series 2011 Bonds pursuant to DASNY's Independent Colleges and Universities Program in an estimated aggregate principal amount not to exceed \$500,000,000, on behalf of Columbia. With the subject funding request officially up for consideration, DASNY's status in the environmental review process changed to involved agency with an approval action pursuant to *SEORA*. On December 6, 2010, DASNY distributed its Findings Statement for certain Phase 1 components of the *Academic Mixed-Use Development Project* that were included in the 2011 bond financing. Some of those project components were also included in DASNY's *Columbia University 2012 Financing Project*.
20. On December 14, 2011, upon agreement with the Empire State Development Corporation ("ESDC"), Columbia executed a *Declaration of Covenants and Restrictions* (the "Declaration") that further refined and amended the commitments and mitigation measures set forth in the Interim Declaration as discussed in the *FEIS* and *FEIS Memo*.

Potential Environmental Effects of the Proposed Action and Proposed Project

21. Columbia University's *Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development Project* received approval for the rezoning of the manufacturing districts in the Project Area to a new MMU Zoning District with the purpose of promoting redevelopment adjacent to the waterfront consistent with local planning recommendations and objectives (e.g., New York City Economic Development Corporation's *West Harlem Master Plan*) and allowing the University to develop the Academic Mixed-Use Development to meet its long-term needs for modernization and expansion.
22. The Proposed Project will result in the construction of certain Phase 1 components of Columbia University's Academic Mixed-Use Development, namely the construction of all systems required to complete the Jerome L. Greene Science Center, the construction and equipping of the Central Energy Plant serving the Jerome L. Greene Science Center, the construction of the foundations, slurry wall and other structural systems associated with the development of the Central Below-Grade Facility, the construction of the Lenfest Center for the Arts, the construction of the University Forum (Bowtie Building), and the construction of open space, comprised of plazas, streetscapes and green spaces.
23. As disclosed in the *FEIS*, Columbia University's *Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development Project* has the potential to result in significant adverse impacts on socioeconomic conditions (indirect residential displacement), open space (indirect impacts), historic resources, shadows, traffic and

parking, subway stations, bus line haul, noise, and construction traffic and noise). As such, specific measures, discussed in detail in the “Mitigation” chapter of the *FEIS*, have been identified that will minimize or eliminate the significant adverse impacts. Columbia’s commitments to implement these mitigation measures, as well as environmentally-beneficial aspects of the project (e.g., construction-period emission reduction measures), are embodied in the Declaration. The following focuses on potential significant adverse impacts and mitigation specifically for construction-phase impacts related to the Phase 1 components of the *Academic Mixed-Use Development*.

Land Use and Neighborhood Character

24. Development of the below-grade space during Phase 1 will require temporary closure of West 129th Street, West 130th Street, West 131st Street, and West 132nd Street. The inconvenience and disruption arising from these closures will include diversions of pedestrians, vehicles, and construction truck traffic to other streets. With slurry wall construction required for most of the below-grade space and the buildings above, construction will be underway for several years (up to eight years within the Phase 1 construction area) and the inconveniences of construction traffic, noise, and dust will continue in the general vicinity of that construction area for that period of time.
25. Throughout the construction period, access to surrounding residences, businesses, institutions, and waterfront uses in the Project Area will be maintained. In addition, throughout the construction period, measures will be implemented to control noise, vibration, and dust on construction sites, including the erection of construction fencing and, in some areas, fencing incorporating sound-reducing measures. Because none of these impacts will be continuous in any one location or ultimately permanent, they will not create significant impacts on land use. In addition to the activity associated with construction, some properties not yet in construction will be used for construction staging and for interim use, such as parking. These uses are considered “industrial” and will not conflict with the primarily light industrial, warehouse and storage, transportation and utilities, and auto-related uses that will remain in the Project Area on an interim basis.

Socioeconomic Conditions

26. According to the analysis of socioeconomic conditions documented in Chapter 4 of the *FEIS*, Phase 1 of the Academic Mixed-Use Development will not cause any significant adverse impacts due to direct or indirect residential, business, or institutional displacement or any adverse effects on specific industries. By 2030 (Phase 2), however, there will be the potential for such adverse impacts, and, as documented in the *FEIS*, Columbia has committed to several measures to partially mitigate these impacts. Columbia’s commitment to these mitigation measures is included the Declaration.
27. The Academic Mixed-Use Development will have a significant beneficial impact on the state, city, and local economies through the introduction of thousands of new, long-term

construction jobs and the permanent addition of new private sector jobs for the ongoing operation of the Proposed Project's educational facilities and supporting uses. These jobs are expected to generate millions of dollars in State and City revenues annually, both during the construction period and after the completion of the Proposed Project.

28. As described in the *FEIS*, Columbia anticipates constructing approximately 1.4 million gsf of new facilities by 2015 (Phase 1) and an additional approximately 5.4 million gsf by 2033 (Phase 2).⁷ An estimated \$5.81 billion in direct, construction-related expenditures (all figures in 2007 dollars) will generate an estimated 26,732 person-years (a person-year is the equivalent of one person working full time for one year) of direct construction employment (or the equivalent of 1,215 full-time construction jobs per year for 22 years, of which 1,200 would be generated by construction activity in Columbia's Academic Mixed-Use Area), and an estimated 12,691 person-years of indirect and induced employment within New York City (i.e., employment resulting from construction expenditures in business establishments providing goods and services to the contractors, and additional employment from those expenditures). The total direct and generated jobs in New York City from construction would be 39,423 person-years (the equivalent of 1,792 full-time jobs per year for 22 years). The total economic activity—including indirect expenditures — that would result from construction is estimated at \$10.69 billion in New York State, of which \$9.36 billion would occur in New York City.⁸

Open Space

29. The Academic Mixed-Use Development Project would establish new areas of passive open space in Manhattanville that would be available to area residents, existing and future workers, and visitors. Phase 1 open spaces would be located on the block bounded by Broadway and Twelfth Avenue, West 129th Street and West 130th Street (the Small Square); at the western tip of the triangular block bounded by Broadway, West 125th Street and West 129th Street (the Grove); and on a large through-block central open space between West 130th Street and West 131st Street (the Square). Proposed open spaces

⁷ Certain components of the Phase 1 construction have been completed as of January 2015, including abatement and demolition of above-grade structures; soil excavation to allow for below- and above-grade construction; construction of the foundations and slurry wall to enclose the two blocks from the north side of West 129th Street to the south side of West 131st Street and other structural systems associated with the development of the Central Below-Grade Facility; construction of the Jerome L. Greene Science Center including foundation, slurry wall and related infrastructure; construction and equipping of the Central Energy Plant serving the Phase 1 buildings; and utility construction within the street rights of way within the Phase 1 development area. Complete build out of Phase 1, including the Lenfest Center for the Arts, the University Forum, the School of Business, SIPA, University housing and open space would occur over the next several years

⁸ ESDC projected personal income and tax revenues utilizing an economic model developed by Regional Economic Models, Inc. ("REMI"), which is a different model from the economic model used in the *FEIS*. The REMI model discounts future cash flows to their present value in 2007 dollars, regardless of the year the cash flow occurs. REMI addresses the time value of money, i.e., a cash inflow that occurs sooner is valued more highly than the same cash flow that occurs later. Accordingly, the REMI economic projections differ from those in the *FEIS*, which do not account for the time value of money. The REMI model predicted that over the course of the build out, construction of the Project will generate over 14,000 construction jobs in the state and, along with related employment, would generate over a billion dollars in personal income for New Yorkers. The present value of tax revenues derived from construction expenditures and total personal income of persons employed during this period is estimated to total \$122 million for the State and \$87 million for the city.

would also include midblock open areas extending north-south between West 129th Street and West 133rd Street, and east-west between Broadway and Old Broadway (pedestrian passageways). In total, approximately 2.16 acres (93,965 gsf) of privately owned, publicly-accessible open space would be created.

30. The Phase 1 construction would not displace or eliminate any existing open spaces, and the new open space resources are intended to provide a better connectivity of open space resources to existing and future workers and residents in the area. However, while open space would be added to the Project Area, the Academic Mixed-Use Development Project would also add population (residents, workers, and students), which would result in indirect significant adverse open space impacts. While the Phase 1 construction would result in no direct impacts, in 2030, shadows from the proposed Phase 2 buildings are expected to result in a significant adverse impact on the I.S. 195 Playground during the March and December analysis periods, when large incremental shadows would cover the playground for long durations. Mitigation measures that would be implemented to address both the direct and indirect impacts are described in the *FEIS*, and Columbia's commitment to these measures are set forth in the Declaration.

Historic and Archaeological Resources

31. The Proposed Project was reviewed by DASNY in accordance with the provisions of the *State Historic Preservation Act of 1980* (“*SHPA*”), especially the implementing regulations of Section 14.09 of the *Parks, Recreation and Historic Preservation Law* (“*PRHPL*”), as well as with the requirements of the Memorandum of Understanding (“*MOU*”), dated March 18, 1998, between the Dormitory Authority and the New York State Office of Parks, Recreation and Historic Preservation (“*OPRHP*”). Consultation with *OPRHP* and the New York City Landmarks Preservation Commission (“*LPC*”) determined that the Project Area was not sensitive for archaeological resources (see *LPC* comments dated September 23, 2004, and *OPRHP* letter dated June 6, 2005, in Appendix D.2 of the *FEIS*). Therefore, the Proposed Action will have no adverse impacts on archaeological resources.
32. The *OPRHP* determined that there are structures within the Project Area that are listed on or eligible for listing on the New York State and/or National Registers of Historic Places, including the former Warren Nash Service Station building, a portion of the former West Market Diner, and the Sheffield Farms Stable. Within 90 feet of the Project Site are the Manhattan Valley IRT viaduct (above Broadway), the 125th Street Subway Station (Broadway and West 125th Street), the Riverside Drive viaduct (above Twelfth Avenue), and the Claremont Theater building (3320 Broadway) that have this status. In addition, while not part of the overall Manhattanville project, the Studebaker Building (615 West 131st Street), which is State and National Registers eligible, is within the 17-acre Project Site and is being converted by Columbia to administrative uses in consultation with *OPRHP*.

33. Consistent with the Declaration, a Construction Protection Plan (“CPP”) was developed to avoid construction-related impacts such as ground-borne vibration, falling debris, and accidental damage from heavy machinery on architectural resources within 90 feet of project construction, including the West Market Diner, the Manhattan Valley IRT viaduct, the 125th Street IRT Subway Station, the Riverside Drive viaduct, and — to the extent necessary — the former Warren Nash Service Station building and the Studebaker Building. The CPP follows the guidelines set forth in the *CEQR Technical Manual*, including conforming with LPC’s *New York City Landmarks Preservation Commission Guidelines for Construction Adjacent to a Historic Landmark and Protection Programs for Landmark Buildings*. The CPP also complies with the procedures set forth in the New York City Department of Buildings (“NYCDOB”) *Technical Policy and Procedure Notice* (“TPPN”) #10/88. The protection measures contained in the CPP were approved by LPC on November 8, 2007, and by OPRHP on November 14, 2007 (see Appendix D.2 of the *FEIS*). The approved CPP will be implemented by a professional engineer during any demolition, excavation, and construction activities that are within 90 feet of the aforementioned historic resources.
34. Phase 1 of the Academic Mixed-Use Development will directly affect one architectural resource, the former Sheffield Farms Stable at 3229 Broadway. Specifically, development of the Jerome L. Greene Science Center on the west side of Broadway between West 129th and West 130th Street will be located on the site of the former Sheffield Farms Stable. A feasibility study was undertaken to determine: (1) if the physical characteristics of the building, presently at 3229 Broadway, allow for conversion to academic research use; (2) if alterations to convert the building would impact its historic character; and (3) whether retaining the building would allow Columbia University to meet its academic research space needs. The study and further analysis responding to a comment from OPRHP concluded that it would not be feasible to retain and reuse the former Sheffield Farms Stable (see Chapter 24 of the *FEIS*).
35. Demolition of the former Sheffield Farms Stable constituted a significant adverse impact on architectural resources. A Letter of Resolution (“LOR”), which concluded the Section 14.09 consultation process (OPRHP No. 04PR04734) between the State Historic Preservation Office (“SHPO”), Columbia, and the relevant state agency, ESDC, was executed in December 2008. The LOR describes the mitigation measures agreed upon, which will partially mitigate the impact of the demolition of this historic resource. The mitigation measures address both the direct and indirect impacts to historic resources as described in the *FEIS*, and Columbia’s commitment to these measures are set forth in the Declaration.

Traffic and Parking

36. The development project would add a substantial number of vehicle trips in the Project Area. Columbia will comply with NYCDOT requirements necessary to implement traffic improvements proposed as part of the Academic Mixed-Use Development project, so that no significant adverse traffic impacts would occur at intersections bordering and within the Project Area. Those traffic improvements are set forth in the Declaration.
37. The *FEIS* estimates that by 2015, Phase 1 construction would result in an off-street parking shortfall of up to approximately 260 spaces due to the displacement of existing public parking facilities in the Project Area, which would be a significant adverse parking impact. To address the parking shortfall, Columbia developed a plan to license portions of the New York City Department of Environmental Protection (“NYCDEP”) property between West 135th and West 145th Streets beneath the Henry Hudson Parkway for use as a public parking facility. This area would accommodate approximately 400 parking spaces. Columbia is also prepared to add up to 72 parking spaces through an improvement of operational efficiency and parking configuration at its 560 Riverside Drive parking garage, which would partially mitigate the projected significant adverse parking impact in 2015 if the above public parking facility is not developed. Columbia’s commitment to these mitigation measures are set forth in the Declaration.
38. As detailed in Chapter 21, “Construction,” of the *FEIS*, during Phase 1 construction when West 130th Street will be closed, significant adverse traffic impacts were identified at one and five study area intersections during the 6:00 a.m. to 7:00 a.m. and 3:00 p.m. to 4:00 p.m. analysis hours, respectively. During Phase 2 when West 131st Street will be closed, significant adverse traffic impacts were identified at one and two study area intersections during the 6:00 a.m. to 7:00 a.m. and 3:00 p.m. to 4:00 p.m. analysis hours, respectively. All projected impacts can be mitigated with either an early implementation of Build condition mitigation strategies, or applying other operational mitigation measures. In addition to early implementation of Build condition mitigation strategies or the application of other standard traffic engineering measures, operational strategies involving lane channelization and the deployment of a traffic control officer (“TCO”) during the 3:00 p.m. to 4:00 p.m. analysis hour will be required at the Broadway and West 130th Street intersection to fully mitigate the projected significant adverse traffic impacts in 2027. Columbia’s commitment to construction traffic mitigation measures are set forth in the Declaration.

Noise

39. As described in Chapter 21, “Construction,” of the *FEIS*, construction activities during Phase 1 will result in significant noise impacts at:

- Residences at elevated locations of Riverside Park Community (3333 Broadway) which have a direct line-of-sight to areas of Phase 1 construction (receptor Sites 5, and 5b); and
 - Residences at 560 Riverside Drive which have a direct line-of-sight to the areas of Phase 1 construction (Receptor Sites 7 and 8).
40. With regard to the residential locations identified above where significant noise impacts are predicted to occur — 3333 Broadway (Riverside Park Community), 95 Old Broadway and 1430 Amsterdam Avenue (two buildings of Manhattanville Houses), and 560 Riverside Drive — all of these residences have double-glazed windows, which with a closed window condition will produce approximately 30–35 dBA⁹ of noise attenuation. Riverside Park Community contains sleeves for air-conditioning units, and some, but not all, of the units contain air conditioning; Manhattanville Houses does not contain air-conditioning sleeves, but some units do contain window air-conditioning units; and 560 Riverside Drive, a University-owned building, contains packaged air-conditioning units. At 560 Riverside Drive, the combination of double-glazed windows and air-conditioning units will provide approximately 35 dBA of attenuation. While the building construction at all of the residential structures cited above will provide a significant amount of sound attenuation during cold weather months when windows are closed, except for 560 Riverside Drive and the units in the other buildings with air conditioning, the buildings will provide only limited attenuation (i.e., approximately 10 dBA) during time periods when windows are open for ventilation.
41. To address the significant adverse noise impacts to residents at the 3333 Broadway (Riverside Park Community) and 95 Old Broadway and 1430 Amsterdam Avenue (Manhattanville Houses), the buildings with direct line-of-sight to the Project Area construction, Columbia will make available to tenants in apartments that will be significantly impacted by construction activities, air conditioning units (e.g., sleeve units for residents of 3333 Broadway and window units for residents of 95 Old Broadway and 1430 Amsterdam Avenue), at no cost to the residents for the units, as mitigation for construction impacts. Prior to the commencement of construction in the vicinity of the affected sites, Columbia will notify each of the affected residents that they are eligible to receive an air condition unit. Columbia will have in place an arrangement with a vendor and the residents will notify the vendor of their desire to receive a unit. The vendor will, at Columbia’s expense, install the air conditioners.
42. This commitment will partially mitigate temporary noise impacts due to construction activities. Even with these air conditioning units, for some periods of time, construction noise may result in noise levels which will be above the 45 dBA L10 noise level recommended by *CEQR* for residences, and are noisy and intrusive. In addition, some

⁹ In order to establish a uniform noise measurement that simulates people’s perception of loudness and annoyance, the decibel measurement is weighted to account for how those frequencies are heard in the human ear. This is known as the A-weighted sound level, or “dBA,” and it is the descriptor of noise levels most often used for community noise.

residents in buildings either with existing air conditioning units or with air conditioning units provided as mitigation by Columbia, which have a direct line-of-sight to the areas of construction may be significantly impacted because of insufficient window/wall attenuation.

43. With regard to the one institutional location where significant noise impacts are predicted to occur — Prentis Hall — the design for this building will incorporate sufficient sound attenuation measures (e.g., double-glazed windows and alternative ventilation [air conditioning], which will provide approximately 35 dBA of attenuation), to mitigate the significant impacts due to construction activities for users of this facility. Columbia’s commitment to noise mitigation measures are set forth in the Declaration.

Hazardous Materials

44. Potential contaminants identified in the Academic Mixed-Use Area on lots owned or controlled by Columbia at the time of construction will be remediated (cleaned up) as part of the development of this area by the University. Contaminated soils, historic fill, and demolition debris will be either disposed off site in accordance with all applicable regulations, or capped. Potential impacts during construction and development activities will be avoided by implementing a Construction Health and Safety Plan (“CHASP”), which will ensure that there would be no significant adverse impacts on public health, workers’ safety, or the environment as a result of potential hazardous materials exposed by or encountered during construction. In addition, to address the remediation of known or potential environmental conditions that may be encountered during proposed construction and development activities, a Remedial Action Plan (“RAP”) has been prepared. Both the RAP and CHASP have been approved by the NYCDEP and would be approved by New York State Department of Environmental Conservation (“NYSDEC”), if necessary, in response to a reported petroleum spill.
45. An E-designation¹⁰ was placed on certain lots within the Academic Mixed-Use Area that were not owned or controlled by Columbia University at the time the zoning was approved as well as the remainder of the Project Area, pursuant to Section 11-15 of the New York City Zoning Resolution. Because it is anticipated that Columbia will acquire all properties in Academic Mixed-Use Area (Subdistrict A), either through purchase or from ESDC as the result of eminent domain, Columbia will be responsible for coordinating with the New York City Office of Environmental Remediation (“NYCOER”) to address hazardous materials conditions according to the E-designations. Columbia’s commitment to addressing hazardous materials in the Project Area is set forth in the Declaration.

¹⁰ An E-designation is a mechanism to ensure that properties that are subject to an area-wide rezoning, but cannot be investigated as part of the *CEQR* process in connection with a rezoning because they are not owned or controlled by the applicant, are properly investigated and remediated, if necessary, before redevelopment.

Waterfront Revitalization Program

46. Because the Proposed Project is situated within the designated boundaries of New York City's Coastal Zone, DASNY assessed its consistency with New York City's Local Waterfront Revitalization Program ("LWRP"). The LWRP establishes the city's Coastal Zone and includes a set of 56 policy statements — 44 State policies and 12 city policies — that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources. The Proposed Project will require widened sidewalks on east-west streets in the Project Area, except West 125th Street, the south side of West 129th Street, on the north side of West 131st Street, and the south side of West 132nd Street. Two new significant publicly-accessible open spaces with north-south midblock connections will also be created west of Broadway. These features will result in greater and livelier street-level activity, greenery, and enhanced westward views to the Hudson River, making the Project Area more welcoming to pedestrians. Further, these new streetscape features will contribute to an improved pedestrian corridor along West 125th Street to the West Harlem Waterfront Park.
47. The Proposed Project will not result in adverse impacts on terrestrial plants or animals, water quality, or aquatic biota. Construction associated with the Proposed Project has the potential to result in the removal of some existing street trees, which will be removed and replaced in accordance with permits issued by New York City Department of Parks and Recreation ("NYCDPR"). In addition, the Special Manhattanville Mixed-Use Zoning District has landscaping requirements for all open space areas. This will result in increased vegetation resources within the Academic Mixed-Use Area. The new buildings will be similar in height to the surrounding buildings and will not cause an increased loss of migratory birds from building collisions. The Academic Mixed-Use Development plan and the rezoning of the remaining 18 acres in the Project Area (consisting of 11 acres of land and 7 acres within the Hudson River, which would support no development) will be consistent with the applicable policies of the city's WRP.
48. After review and analysis of these city and state policies, it was determined that there will be no significant adverse impacts in the coastal zone as a result of the Proposed Project. Accordingly, DASNY finds that the Proposed Project is consistent with the applicable policies set forth by 19 *N.Y.C.R.R.* 600.5; and that the Proposed Project is consistent with the city's WRP to the maximum extent practicable.

Energy

49. The Central Energy Plant proposed at West 129th Street adjacent to the Jerome L. Greene Science Center will serve the development south of West 132nd Street.¹¹ The Central Energy Plant will have conventional boilers that will each provide 40,000 pounds per

¹¹ The proposed building on Broadway between West 125th Street and West 129th Street (identified as "Site 1" in the *FEIS*) will either have its own boiler or be served by the central energy plant.

hour (lb/hr) of steam to Columbia's buildings. The Central Energy Plant will be built in phases and will have a maximum capacity of 160,000 lb/hr of steam. The boilers could either operate on natural gas or distillate fuel oil, depending on availability. The boilers will be equipped with low-nitrogen oxide ("NOx") burners. Lighting and other energy needs within the Academic Mixed-Use Area and development outside the Academic Mixed-Use Area are expected to use the existing energy generation, transmission, and distribution systems.

50. The Phase 1 Central Energy Plant as well as smaller package boiler systems proposed at various locations to provide heating and cooling to the new buildings in the Academic Mixed-Use Area will not result in discharges to the Hudson River and will not affect aquatic resources. As presented in Chapter 19, "Air Quality," of the *FEIS* air emissions from the proposed central energy plants and package boilers will not result in significant adverse air quality impacts. Therefore, potential air emissions from the proposed energy plants and package boiler systems will not be expected to result in significant adverse impacts on terrestrial or aquatic natural resources. Columbia's commitment to implementing air quality measures is set forth in the Declaration.
51. Columbia will design, build and operate the Project's residential and academic buildings to achieve a minimum Leadership in Energy and Environmental Design ("LEED") v. 2.2 Silver Certification (or its equivalent) from the United States Green Building Council ("USGBC"). Although current USGBC standards for sustainability may not be directly applicable to laboratory facilities or to large-scale developments taking place over many years, Columbia will undertake good faith efforts to apply multi-building development criteria and will, where practicable, incorporate any relevant new standards into current and future stages of the Project's development. Columbia participates in Laboratories for the 21st Century ("Labs21"), a cooperative program of the U.S. Environmental Protection Agency ("USEPA") and the U.S. Department of Energy ("USDOE") intended to improve the energy efficiency and environmental performance of laboratories. During the construction and operation of the Proposed Project's academic research facilities, Columbia will design, build and operate new academic research buildings in accordance with Labs21 guidelines. Columbia has agreed to exercise reasonable efforts to reduce its greenhouse gas emissions by 2017. Columbia's commitments to energy conservation and environmental sustainability measures are included in the Declaration.
52. Development resulting from the Proposed Project will be required to comply with the New York State Energy Conservation Construction Code, which governs performance requirements of HVAC systems, and the exterior building envelope of new buildings. In compliance with the code, the buildings will incorporate all required energy conservation measures, including meeting the code's requirements relating to energy efficiency and combined thermal transmittance.
53. The Academic Mixed-Use Development will displace a number of existing uses and eliminate their energy consumption. (See Chapter 4, "Socioeconomic Conditions," of the

FEIS for a description of displaced uses.) This reduction is estimated to be 25,011 million BTUs per year. The total energy consumption within the Academic Mixed-Use Area (both Phase 1 and Phase 2 development) is estimated at 155,237 million BTUs. The additional consumption of about 130,226 million BTUs per year will be small compared with the existing energy demands of New York City. Further, this additional demand is not expected to overburden the energy generation, transmission, and distribution system, and will not cause a significant adverse energy impact.

Conditions and Mitigation Measures

54. The potential effects of the Proposed Project, including potential effects on land use, zoning, public policy, socioeconomic conditions, community facilities, open space, shadows, historic resources, urban design and visual resources, neighborhood character, natural resources, hazardous materials, the city's waterfront revitalization program, infrastructure, solid waste, energy, traffic and parking, transit and pedestrians, air quality, noise, and public health have been adequately analyzed and disclosed in the *FEIS*. Consistent with social, economic, and other essential considerations, to the maximum extent practicable, potential adverse environmental effects revealed in the *FEIS* will be minimized or avoided as described, therein. Measures to mitigate the potential adverse impacts were identified in the *FEIS*, and Columbia's commitments to implement these measures are set forth in the Declaration.
55. The core substantive requirement for *SEQR* findings is the conclusion that all significant adverse environmental impacts have been avoided, minimized, or mitigated, to the maximum extent practicable.
56. On November 26, 2007, the CPC, as Lead Agency, issued a *Findings Statement* that determined that the requirements of 6 *N.Y.C.R.R.* Part 617 of *SEQRA* had been met and that, consistent with social, economic, and other essential considerations from among reasonable alternatives thereto, the approved actions were ones that avoided or minimized adverse environmental impacts to the maximum extent practicable. DASNY hereby adopts, and incorporates by reference, all of the lead agency findings in addition to the *SEQR* findings it has identified herein.
57. The CPC's *Findings Statement* also determined that adverse environmental impacts disclosed in the *FEIS* would be minimized or avoided to the maximum extent practicable by incorporating as conditions to its approval, pursuant to the Interim Declaration dated November 26, 2007, the identified mitigation measures. DASNY hereby adopts, and incorporates by reference into this *Findings Statement*, the Interim Declaration and all appropriate mitigation measures identified therein as well as the updated Declaration dated December 14, 2011. Furthermore, DASNY, as a condition of the subject funding authorization approval, hereby requires full compliance and implementation by Columbia of the mitigation measures identified in the Declaration.

CERTIFICATION OF FINDINGS TO APPROVE/FUND/UNDERTAKE

Having considered the *DEIS* and *FEIS*, and having considered the preceding written facts and conclusions relied upon to meet the requirements of the *State Environmental Quality Review Act*, codified at Article 8 of the New York *Environmental Conservation Law*, and its implementing regulations, promulgated at Part 617 of Title 6 of the *N.Y.C.R.R.*, this Statement of Findings certifies that:

1. The requirements of the *State Environmental Quality Review Act*, and its implementing regulations, 6 *N.Y.C.R.R.* Part 617, have been met and fully satisfied;
2. Consistent with the social, economic and other essential considerations from among the reasonable alternatives thereto, the action approved is one which minimizes or avoids adverse environmental effects to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized by incorporating as conditions to the decision those mitigative measures which were identified as practicable; and
3. Since the action is in the coastal area, that this agency has made a written finding that the action is consistent with the applicable policies of set forth by 19 *N.Y.C.R.R.* 600.5; and, since the Secretary of State has approved a local government waterfront revitalization program, that the action is consistent with the waterfront revitalization program to the maximum extent practicable.

Dormitory Authority State of New York

(Name of Agency)



(Signature of Responsible Official)

Jack D. Homkow

(Name of Responsible Official)

Director, Office of Environmental Affairs

(Title of Responsible Official)

March 9, 2015

(Date)

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