

SECURITIES AND EXCHANGE COMMISSION

FORM FWP

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SUBJECT COMPANY

BENCHMARK 2019-B12 MORTGAGE TRUST

CIK: **1781089** | State of Incorporation: **DE**
Type: **FWP** | Act: **34** | File No.: **333-228597-01** | Film No.: **19957620**
SIC: **6189** Asset-backed securities

Mailing Address
*390 GREENWICH STREET
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Business Address
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NEW YORK NY 10013
2128165343*

FILED BY

CITIGROUP COMMERCIAL MORTGAGE SECURITIES INC

CIK: **1258361** | IRS No.: **861073506** | State of Incorporation: **DE**
Type: **FWP**
SIC: **6189** Asset-backed securities

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NEW YORK NY 10013*

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July 16, 2019

Free Writing Prospectus

Structural and Collateral Term Sheet

\$1,181,871,508
(Approximate Initial Mortgage Pool Balance)

\$1,040,209,000
(Offered Certificates)

Benchmark 2019-B12 Mortgage Trust
As Issuing Entity

Citigroup Commercial Mortgage Securities Inc.
As Depositor

Commercial Mortgage Pass-Through Certificates, Series 2019-B12

Citi Real Estate Funding Inc.
German American Capital Corporation
JPMorgan Chase Bank, National Association

As Sponsors and Mortgage Loan Sellers

STATEMENT REGARDING THIS FREE WRITING PROSPECTUS

The depositor has filed a registration statement (including a prospectus) with the Securities and Exchange Commission (“SEC”) (SEC File No. 333-228597) for the offering to which this communication relates. Before you invest, you should read the prospectus in the registration statement and other documents the depositor has filed with the SEC for more complete information about the depositor, the issuing entity and this offering. You may get these documents for free by visiting EDGAR on the SEC website at www.sec.gov. Alternatively, the depositor or Citigroup Global Markets Inc., Deutsche Bank Securities Inc., J.P. Morgan Securities LLC, Drexel Hamilton, LLC, Academy Securities, Inc. or any other underwriter or dealer participating in this offering will arrange to send you the prospectus if you request it by calling toll-free 1-800-831-9146.

IMPORTANT NOTICE RELATING TO AUTOMATICALLY GENERATED EMAIL DISCLAIMERS

Any legends, disclaimers or other notices that may appear at the bottom of the email communication to which this free writing prospectus is attached relating to (1) these materials not constituting an offer (or a solicitation of an offer), (2) no representation being made that these materials are accurate or complete and that these materials may not be updated or (3) these materials possibly being confidential, are, in each case, not applicable to these materials and should be disregarded. Such legends, disclaimers or other notices have been automatically generated as a result of these materials having been sent via Bloomberg or another system.

Citigroup

J.P. Morgan

Deutsche Bank Securities

Co-Lead Managers and Joint Bookrunners

Drexel Hamilton
Co-Manager

Academy Securities
Co-Manager

CERTIFICATE SUMMARY

The securities offered by this structural and collateral term sheet (this “**Term Sheet**”) are described in greater detail in the preliminary prospectus, dated on or about July 16, 2019, included as part of our registration statement (SEC File No. 333-228597) (the “**Preliminary Prospectus**”). The Preliminary Prospectus contains material information that is not contained in this Term Sheet (including, without limitation, a detailed discussion of risks associated with an investment in the offered securities under the heading “*Risk Factors*” in the Preliminary Prospectus). The Preliminary Prospectus is available upon request from Citigroup Global Markets Inc., Deutsche Bank Securities Inc., J.P. Morgan Securities LLC, Drexel Hamilton, LLC or Academy Securities, Inc. This Term Sheet is subject to change.

For information regarding certain risks associated with an investment in this transaction, refer to “*Risk Factors*” in the Preliminary Prospectus. Capitalized terms used but not otherwise defined in this Term Sheet have the respective meanings assigned to those terms in the Preliminary Prospectus.

The Securities May Not Be a Suitable Investment for You

The securities offered by this Term Sheet are not suitable investments for all investors. In particular, you should not purchase any class of securities unless you understand and are able to bear the prepayment, credit, liquidity and market risks associated with that class of securities. For those reasons and for the reasons set forth under the heading “*Risk Factors*” in the Preliminary Prospectus, the yield to maturity of, the aggregate amount and timing of distributions on and the market value of the offered securities are subject to material variability from period to period and give rise to the potential for significant loss over the life of those securities. The interaction of these factors and their effects are impossible to predict and are likely to change from time to time. As a result, an investment in the offered securities involves substantial risks and uncertainties and should be considered only by sophisticated institutional investors with substantial investment experience with similar types of securities and who have conducted appropriate due diligence on the mortgage loans and the securities. Potential investors are advised and encouraged to review the Preliminary Prospectus in full and to consult with their legal, tax, accounting and other advisors prior to making any investment in the offered securities described in this Term Sheet.

The securities offered by these materials are being offered when, as and if issued. This Term Sheet is not to be construed as an offer to sell or the solicitation of any offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. The information contained in this Term Sheet may not pertain to any securities that will actually be sold. The information contained in this Term Sheet may be based on assumptions regarding market conditions and other matters as reflected in this Term Sheet. We make no representations regarding the reasonableness of such assumptions or the likelihood that any of such assumptions will coincide with actual market conditions or events, and this Term Sheet should not be relied upon for such purposes. We and our affiliates, officers, directors, partners and employees, including persons involved in the preparation or issuance of this Term Sheet may, from time to time, have long or short positions in, and buy or sell, the securities mentioned in this Term Sheet or derivatives thereof (including options). Information contained in this Term Sheet is current as of the date appearing on this Term Sheet only. Information in this Term Sheet regarding the securities and the mortgage loans backing any securities discussed in this Term Sheet supersedes all prior information regarding such securities and mortgage loans. None of Citigroup Global Markets Inc., Deutsche Bank Securities Inc., J.P. Morgan Securities LLC, Drexel Hamilton, LLC or Academy Securities, Inc. provides accounting, tax or legal advice.

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The issuing entity will be relying on an exclusion or exemption from the definition of “investment company” under the Investment Company Act of 1940, as amended (the “**Investment Company Act**”), contained in Section 3(c)(5) of the Investment Company Act or Rule 3a-7 under the Investment Company Act, although there may be additional exclusions or exemptions available to the issuing entity. The issuing entity is being structured so as not to constitute a “covered fund” for purposes of the Volcker Rule under the Dodd-Frank Act (both as defined in “*Risk Factors—Legal and Regulatory Provisions Affecting Investors Could Adversely Affect the Liquidity and Other Aspects of the Offered Certificates*” in the Preliminary Prospectus). See also “*Legal Investment*” in the Preliminary Prospectus.

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CERTIFICATE SUMMARY

OFFERED CERTIFICATES

Offered Classes	Expected Ratings (S&P / Fitch / Morningstar) ⁽¹⁾	Approximate Initial Certificate Balance or Notional Amount ⁽²⁾	Approximate Initial Credit Support ⁽³⁾	Initial Pass-Through Rate ⁽⁴⁾	Pass-Through Rate Description	Expected Wtd. Avg. Life (Yrs) ⁽⁵⁾	Expected Principal Window ⁽⁵⁾
Class A-1	AAA(sf) / AAAsf / AAA	\$16,310,000	30.000%	%	(6)	2.66	9/19 – 4/24
Class A-2	AAA(sf) / AAAsf / AAA	\$221,930,000	30.000%	%	(6)	4.96	4/24 – 11/24
Class A-3	AAA(sf) / AAAsf / AAA	\$5,920,000	30.000%	%	(6)	6.85	6/26 – 6/26
Class A-4	AAA(sf) / AAAsf / AAA	\$215,000,000	30.000%	%	(6)	9.71	1/29 – 6/29
Class A-5	AAA(sf) / AAAsf / AAA	\$321,699,000	30.000%	%	(6)	9.87	6/29 – 7/29
Class A-AB	AAA(sf) / AAAsf / AAA	\$22,612,000	30.000%	%	(6)	7.44	11/24 – 1/29
Class X-A	AA(sf) / AAAsf / AAA	\$946,949,000 ⁽⁷⁾	N/A	%	Variable IO ⁽⁸⁾	N/A	N/A
Class A-S	AA(sf) / AAAsf / AAA	\$143,478,000	17.500%	%	(6)	9.94	7/29 – 7/29
Class B	NR / AA-sf / AA-	\$50,217,000	13.125%	%	(6)	9.94	7/29 – 7/29
Class C	NR / A-sf / A	\$43,043,000	9.375%	%	(6)	9.94	7/29 – 7/29

NON-OFFERED POOLED CERTIFICATES⁽⁹⁾

Non-Offered Classes	Expected Ratings (S&P / Fitch / Morningstar) ⁽¹⁾	Approximate Initial Certificate Balance or Notional Amount ⁽²⁾	Approximate Initial Credit Support ⁽³⁾	Initial Pass-Through Rate ⁽⁴⁾	Pass-Through Rate Description	Expected Wtd. Avg. Life (Yrs) ⁽⁵⁾	Expected Principal Window ⁽⁵⁾
Class X-B	NR / A-sf / AAA	\$93,260,000 ⁽⁷⁾	N/A	%	Variable IO ⁽⁸⁾	N/A	N/A
Class X-D	NR / BBB-sf / AAA	\$41,608,000 ⁽⁷⁾	N/A	%	Variable IO ⁽⁸⁾	N/A	N/A
Class D	NR / BBBsf / BBB+	\$24,391,000	7.250%	%	(6)	9.99	7/29 – 8/29
Class E	NR / BBB-sf / BBB	\$17,217,000	5.750%	%	(6)	10.02	8/29 – 8/29
Class F-RR ⁽¹⁰⁾	NR / BB-sf / BB+	\$20,087,000	4.000%	%	(6)	10.02	8/29 – 8/29
Class G-RR ⁽¹⁰⁾	NR / B-sf / B+	\$11,478,000	3.000%	%	(6)	10.02	8/29 – 8/29
Class J-RR ⁽¹⁰⁾	NR / NR / NR	\$34,435,107	0.000%	%	(6)	10.02	8/29 – 8/29
Class S ⁽¹¹⁾	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Class R ⁽¹¹⁾	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NON-OFFERED VERTICAL RISK RETENTION INTEREST⁽⁹⁾

Non-Offered Eligible Vertical Interest	Expected Ratings (S&P / Fitch / Morningstar) ⁽¹⁾	Approximate Initial Certificate Balance ⁽²⁾	Approximate Initial Credit Support ⁽³⁾	Initial Pass-Through Rate ⁽⁴⁾	Pass-Through Rate Description	Expected Wtd. Avg. Life (Yrs) ⁽⁵⁾	Expected Principal Window ⁽⁵⁾
VRR Interest ⁽¹²⁾	NR / NR / NR	\$34,054,400	N/A ⁽¹³⁾	%	(14)	8.75	9/19 – 8/29

NON-OFFERED LOAN-SPECIFIC CERTIFICATES⁽⁹⁾⁽¹⁵⁾

Woodlands Mall

Non-Offered Classes	Expected Ratings (S&P / Fitch / Morningstar) ⁽¹⁾	Approximate Initial Certificate Balance ⁽²⁾	Approximate Initial Credit Support ⁽¹⁶⁾	Initial Pass-Through Rate ⁽⁴⁾	Pass-Through Rate Description	Expected Wtd. Avg. Life (Yrs) ⁽⁵⁾	Expected Principal Window ⁽⁵⁾
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Class WM-A	A-(sf) / NR / NR	\$78,436,000	22.314%	%	(17)	10.02	8/29 – 8/29
Class WM-B	BBB-(sf) / NR / NR	\$48,094,000	10.402%	%	(17)	10.02	8/29 – 8/29
Class WM-C	BB(sf) / NR / NR	\$42,000,000	0.000%	%	(17)	10.02	8/29 – 8/29
Non-Offered Vertical Risk Retention Interest	Expected Ratings (S&P / Fitch / Morningstar)⁽¹⁾	Approximate Initial Certificate Balance⁽²⁾	Approximate Initial Credit Support⁽¹⁶⁾	Initial Pass-Through Rate⁽⁴⁾	Pass-Through Rate Description	Expected Wtd. Avg. Life (Yrs)⁽⁵⁾	Expected Principal Window⁽⁵⁾
WMRR Interest ⁽¹⁸⁾	NR / NR / NR	\$8,870,000	N/A ⁽¹⁹⁾	%	(20)	10.02	8/29 – 8/29
The Centre							
Non-Offered Classes	Expected Ratings (S&P / Fitch / Morningstar)⁽¹⁾	Approximate Initial Certificate Balance⁽²⁾	Approximate Initial Credit Support⁽¹⁶⁾	Initial Pass-Through Rate⁽⁴⁾	Pass-Through Rate Description	Expected Wtd. Avg. Life (Yrs)⁽⁵⁾	Expected Principal Window⁽⁵⁾
Class TC-A	A+(sf) / NR / NR	\$9,600,000	46.461%	%	(17)	4.94	7/24 – 7/24
Class TC-B	BBB+(sf) / NR / NR	\$8,900,000	39.615%	%	(17)	4.94	7/24 – 7/24
Class TC-C	BB+(sf) / NR / NR	\$10,400,000	31.615%	%	(17)	4.94	7/24 – 7/24
Class TC-D	B+(sf) / NR / NR	\$10,300,000	23.692%	%	(17)	4.94	7/24 – 7/24
Class TC-E	NR / NR / NR	\$25,800,000	3.846%	%	(17)	4.94	7/24 – 7/24
Class TCRR ⁽²¹⁾	NR / NR / NR	\$5,000,000	0.000%	%	(17)	4.94	7/24 – 7/24

It is a condition of issuance that the offered certificates and certain classes of non-offered certificates receive the ratings set forth above. The anticipated ratings shown are those of S&P Global Ratings, a Standard & Poor's Financial Services LLC business ("**S&P**"), Fitch Ratings, Inc. ("**Fitch**") (1) and Morningstar Credit Ratings, LLC ("**Morningstar**"). Subject to the discussion under "*Ratings*" in the Preliminary Prospectus, the ratings on the certificates address the likelihood of the timely receipt by holders of all payments of interest to which they are entitled on each distribution date and, except in the case of the interest only certificates, the

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ultimate receipt by holders of all payments of principal to which they are entitled on or before the applicable rated final distribution date. Certain nationally recognized statistical rating organizations, as defined in Section 3(a)(62) of the Securities Exchange Act of 1934, as amended, that were not hired by the depositor may use information they receive pursuant to Rule 17g-5 under the Securities Exchange Act of 1934, as amended, or otherwise to rate the offered certificates. We cannot assure you as to what ratings a non-hired nationally recognized statistical rating organization would assign. See “*Risk Factors—Nationally Recognized Statistical Rating Organizations May Assign Different Ratings to the Certificates; Ratings of the Certificates Reflect Only the Views of the Applicable Rating Agencies as of the Dates Such Ratings Were Issued; Ratings May Affect ERISA Eligibility; Ratings May Be Downgraded*” in the Preliminary Prospectus. S&P and Fitch have informed us that the “sf” designation in the ratings represents an identifier of structured finance product ratings. For additional information about this identifier, prospective investors can go to the related rating agency’s website. The depositor and the underwriters have not verified, do not adopt and do not accept responsibility for any statements made by the rating agencies on those websites. Credit ratings referenced throughout this Term Sheet are forward-looking opinions about credit risk and express a rating agency’s opinion about the willingness and ability of an issuer of securities to meet its financial obligations in full and on time. Ratings are not indications of investment merit and are not buy, sell or hold recommendations, a measure of asset value or an indication of the suitability of an investment.

- Approximate, subject to a variance of plus or minus 5% and further subject to any additional variance discussed in a footnote below. In addition, the notional amounts of the Class X-A, Class X-B and Class X-D certificates (collectively, the “**Class X Certificates**” or the “**Pooled Class X Certificates**”) may vary depending upon the final pricing of the classes of Pooled Principal Balance Certificates (as defined in footnote (13) below) whose certificate balances comprise such notional amounts, and, if as a result of such pricing (a) the pass-through rate of any class of the Pooled Class X Certificates, as applicable, would be equal to zero at all times, such class of certificates will not be issued on the Closing Date or (b) the pass-through rate of any class of Pooled Principal Balance Certificates whose certificate balance comprises such notional amount is at all times equal to the weighted average of the net interest rates on the mortgage loans (in each case, adjusted, if necessary, to accrue on the basis of a 360-day year consisting of twelve 30-day months) as in effect from time to time, the certificate balance of such class of Pooled Principal Balance Certificates may not be part of, and there would be a corresponding reduction in, such notional amount of the related class of Pooled Class X Certificates.

- “(3) **Approximate Initial Credit Support**” means, with respect to any Class of Non-Vertically Retained Pooled Principal Balance Certificates, the quotient, expressed as a percentage, of (i) the aggregate of the initial Certificate Balances of all Classes of Non-Vertically Retained Pooled Principal Balance Certificates, if any, junior to such Class of Non-Vertically Retained Pooled Principal Balance Certificates, divided by (ii) the aggregate of the initial Certificate Balances of all Classes of Non-Vertically Retained Pooled Principal Balance Certificates. The approximate initial credit support percentages set forth for the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5 and Class A-AB certificates are represented in the aggregate. The approximate initial credit support percentage shown for each class of Non-Vertically Retained Pooled Principal Balance Certificates does not take into account the subordination provided by any Trust Subordinate Companion Loans (as defined in footnote (15) below), provided that payments on each Trust Subordinate Companion Loan are generally subordinate to payments on the related senior loans in the related Loan Combination as and to the extent provided in the related co-lender agreement. The approximate initial credit support percentages shown in the table above do not take into account the VRR Interest.

- (4) Approximate *per annum* rate as of the Closing Date.

- Determined assuming no prepayments prior to the maturity date or any anticipated repayment date, as applicable, for any mortgage loan or Trust Subordinate Companion Loan and based on the modeling assumptions described under “*Yield, Prepayment and Maturity Considerations*” in the Preliminary Prospectus.

- (6) For any distribution date, the pass-through rate for each class of the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5, Class A-AB, Class A-S, Class B, Class C, Class D, Class E, Class F-RR, Class G-RR and Class J-RR certificates (collectively, the “**Non-Vertically Retained Pooled Principal Balance Certificates**”, and collectively with the Pooled Class X Certificates, the Class S certificates and the VRR Interest, the “**Pooled Certificates**”) will generally be equal to one of (i) a fixed *per annum* rate, (ii) the weighted average of the net interest rates on the mortgage loans (in each case, adjusted, if necessary, to accrue on the basis of a 360-day year consisting of twelve 30-day months) as in effect from time to time, (iii) a rate equal to the lesser of a specified *per annum* rate and the weighted average rate described in clause (ii), or (iv) the weighted average rate described in clause (ii) less a specified percentage, but no less than 0.000%. The Trust Subordinate Companion Loans will not be taken into account in determining pass-through rates on the Non-Vertically Retained Pooled Principal Balance Certificates. See “*Description of the Certificates—Distributions—Pass-Through Rates*” in the Preliminary Prospectus.

- (7) The Pooled Class X Certificates will not have certificate balances and will not be entitled to receive distributions of principal. Interest will accrue on each class of Pooled Class X Certificates at the related pass-through rate based upon the related notional amount. The notional amount of each class of the Pooled Class X Certificates will be equal to the certificate balance or the aggregate of the certificate balances, as applicable, from time to time of the class or classes of the Non-Vertically Retained Pooled Principal Balance Certificates identified in the same row as such class of Pooled Class X Certificates in the chart below (as to such class of Pooled Class X Certificates, the “**Corresponding Pooled Principal Balance Certificates**”):

Class of Pooled Class X Certificates	Class(es) of Corresponding Pooled Principal Balance Certificates
Class X-A	Class A-1, Class A-2, Class A-3, Class A-4, Class A-5, Class A-AB and Class A-S
Class X-B	Class B and Class C
Class X-D	Class D and Class E

(8) The pass-through rate for each class of Pooled Class X Certificates will generally be a *per annum* rate equal to the excess, if any, of (i) the weighted average of the net interest rates on the mortgage loans (in each case, adjusted, if necessary, to accrue on the basis of a 360-day year consisting of twelve 30-day months) as in effect from time to time, over (ii) the pass-through rate (or, if applicable, the weighted average of the pass-through rates) of the class or classes of Corresponding Pooled Principal Balance Certificates as in effect from time to time, as described in the Preliminary Prospectus.

(9) The classes of certificates set forth below “Non-Offered Pooled Certificates”, “Non-Offered Vertical Risk Retention Interest” and “Non-Offered Loan-Specific Certificates” in the table are not offered by this Term Sheet.

(10) In partial satisfaction of the risk retention obligations of Citi Real Estate Funding Inc. (“**CREFI**”), as “retaining sponsor” (as such term is defined in Regulation RR) with respect to the securitization transaction constituted by the issuance of the Pooled Certificates, all of the Class F-RR, Class G-RR and Class J-RR certificates (collectively, the “**HRR Certificates**”), with an aggregate fair value expected to represent at least 2.12% of the fair value, as of the Closing Date, of all of the Pooled Certificates, will collectively constitute an “eligible horizontal residual interest” (as such term is defined in Regulation RR) that is to be purchased and retained by KKR Real Estate Credit Opportunity Partners II L.P., a Delaware limited partnership, in accordance with the credit risk retention rules applicable to such securitization transaction. See “*Credit Risk Retention*” in the Preliminary Prospectus.

(11) Neither the Class S certificates nor the Class R certificates will have a certificate balance, notional amount, pass-through rate, rating or rated final distribution date. A specified portion of the excess interest accruing after the related anticipated repayment date on any mortgage loan with an anticipated repayment date will, to the extent collected, be allocated to the Class S certificates as set forth in “*Description of the Certificates—Distributions—Excess Interest*” in the Preliminary Prospectus. The Class R certificates will represent the residual interests in each of four separate REMICs, as further described in the Preliminary Prospectus. The Class R certificates will not be entitled to distributions of principal or interest.

(12) In partial satisfaction of CREFI’s remaining risk retention obligations as retaining sponsor for the securitization transaction constituted by the issuance of the Pooled Certificates, CREFI is expected to acquire (or cause one or more other retaining parties to acquire) from the depositor, on the Closing Date, portions of an “eligible vertical interest” (as such term is defined in Regulation RR) in the form of a “single vertical security” (as such term is defined in Regulation RR) with an initial certificate balance of approximately \$34,054,400 (the “**VRR Interest**”), which is expected to represent approximately 2.88% of the aggregate initial certificate balance of all of the Pooled Certificates, subject to any variation in the initial certificate balance of the VRR Interest following calculation of the actual fair value of

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the HRR Certificates and of all of the Pooled Certificates, as described under “*Credit Risk Retention*” in the Preliminary Prospectus. The VRR Interest will be retained by certain retaining parties in accordance with the credit risk retention rules applicable to such securitization transaction. See “*Credit Risk Retention*” in the Preliminary Prospectus. The VRR Interest is a class of certificates, but is not offered hereby.

(13) Although the approximate initial credit support percentages shown in the table with respect to the Non-Vertically Retained Pooled Principal Balance Certificates do not take into account the VRR Interest, losses incurred on the mortgage loans will be allocated between the VRR Interest, on the one hand, and the Non-Vertically Retained Pooled Principal Balance Certificates, on the other hand, *pro rata* in accordance with their respective outstanding certificate balances. See “*Credit Risk Retention*” and “*Description of the Certificates*” in the Preliminary Prospectus. The VRR Interest and the Non-Vertically Retained Pooled Principal Balance Certificates are collectively referred to in this Term Sheet as the “**Pooled Principal Balance Certificates**”.

(14) Although it does not have a specified pass-through rate (other than for tax reporting purposes), the effective interest rate for the VRR Interest will be the weighted average of the net mortgage interest rates on the mortgage loans (in each case, adjusted, if necessary, to accrue on the basis of a 360-day year consisting of twelve 30-day months) as in effect from time to time.

(15) The Class WM-A, Class WM-B and Class WM-C Certificates and the WMRR Interest are collectively referred to as the “**Woodlands Mall Loan-Specific Certificates**” and the Class TC-A, Class TC-B, Class TC-C, Class TC-D, Class TC-E and Class TCRR certificates are collectively referred to as the “**Centre Loan-Specific Certificates**”. The Woodlands Mall Loan-Specific Certificates and the Centre Loan-Specific Certificates collectively constitute the “**Loan-Specific Certificates**” or the “**Loan-Specific Principal Balance Certificates**” (and, collectively with the Pooled Principal Balance Certificates, constitute the “**Principal Balance Certificates**”). The Loan-Specific Certificates will only be entitled to receive distributions from, and will only incur losses with respect to, the Woodlands Mall trust subordinate companion loan or The Centre trust subordinate companion loan (each, a “Trust Subordinate Companion Loan” and collectively, the “**Trust Subordinate Companion Loans**”), as applicable. Each Trust Subordinate Companion Loan will be included as an asset of the issuing entity but will not be part of the mortgage pool backing the Pooled Certificates. No class of Pooled Certificates will have any interest in either Trust Subordinate Companion Loan. See “*Description of the Mortgage Pool—The Loan Combinations—The Woodlands Mall Pari Passu-AB Loan Combination*” and “*—The Centre Pari Passu-AB Loan Combination*” in the Preliminary Prospectus.

(16) “**Approximate Initial Credit Support**” means, with respect to any Class of Loan-Specific Certificates (other than the WMRR Interest), the quotient, expressed as a percentage, of (i) the aggregate of the initial Certificate Balances of all Classes of Loan-Specific Certificates (other than the WMRR Interest), if any, backed by the same Trust Subordinate Companion Loan as and junior to the subject Class of Loan-Specific Certificates, divided by (ii) the sum of (A) the aggregate of the initial Certificate Balances of all Classes of Loan-Specific Certificates (other than the WMRR Interest) backed by the same Trust Subordinate Companion Loan as the subject Class of Loan-Specific Certificates and (B) (x) with respect to the Woodlands Mall Loan-Specific Certificates, 95% of the aggregate outstanding principal balance of the senior loans included in the Woodlands Mall Loan Combination and (y) with respect to the Centre Loan-Specific Certificates, the aggregate outstanding principal balance of the senior loans included in The Centre Loan Combination, in each case as of the Cut-off Date. The approximate initial credit support percentages shown in the table above do not take into account the WMRR Interest.

(17) The pass-through rates for the Loan-Specific Certificates, in each case, will equal one of the following per annum rates: (i) a fixed rate, (ii) the net mortgage rate (adjusted, if necessary, to accrue on the basis of a 360-day year consisting of twelve 30-day months) on the related Trust Subordinate Companion Loan, (iii) the lesser of a specified rate and the net mortgage rate on the Trust Subordinate Companion Loan described in clause (ii), or (iv) the net mortgage rate on the related Trust Subordinate Companion Loan described in clause (ii) less a specified rate. See “*Description of the Certificates—Distributions—Pass-Through Rates*” in the Preliminary Prospectus.

(18) German American Capital Corporation is the only sponsor (and will act as “retaining sponsor” (as such term is defined in Regulation RR)) with respect to the securitization transaction constituted by the issuance of the Woodlands Mall Loan-Specific Certificates. In connection therewith, German American Capital Corporation is expected to acquire from the depositor on the Closing Date an “eligible vertical interest” (as such term is defined in Regulation RR) in the form of a single vertical security with an aggregate initial certificate balance of approximately \$8,870,000 (the “**WMRR Interest**”), which is expected to represent 5.0% of the aggregate initial certificate balance of all Woodlands Mall Loan-Specific Certificates. The WMRR Interest is expected to be retained by German American Capital Corporation or its “majority-owned affiliate” (as such term is defined in Regulation RR) in accordance with the credit risk retention rules applicable to such securitization transaction. The WMRR Interest is a class of certificates, but is not offered hereby.

(19) Although the approximate initial credit support percentages shown in the table with respect to the Woodlands Mall Loan-Specific Certificates (other than the WMRR Interest) do not take into account the WMRR Interest, losses incurred on the Woodlands Mall Trust Subordinate Companion Loan will be allocated between the WMRR Interest, on the one hand, and the other classes of Woodlands Mall Loan-Specific Certificates, on the other hand, *pro rata* in accordance with their respective outstanding certificate balances.

Except for tax reporting purposes, the WMRR Interest does not have a specified pass-through rate; however, the effective interest rate on the WMRR Interest will be a per annum rate equal to the net mortgage rate (adjusted, if necessary, to accrue interest on the basis of a 360-day year consisting of twelve 30-day months) as in effect from time to time on the related Trust Subordinate Companion Loan.

Citi Real Estate Funding Inc. is the only sponsor (and will act as “retaining sponsor” (as such term is defined in Regulation RR)), with respect to the securitization transaction constituted by the issuance of the Centre Loan-Specific Certificates. In connection therewith, the Class TCRR certificates (the (21) “**Centre Loan-Specific HRR Certificates**”) will be purchased and retained by a third party purchaser contemplated by Rule 7 of Regulation RR (the “**Centre Retaining Third Party Purchaser**”), in accordance with the credit risk retention rules applicable to the securitization transaction constituted by the issuance of the Centre Loan-Specific Certificates.

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MORTGAGE POOL CHARACTERISTICS

Mortgage Pool Characteristics⁽¹⁾

Initial Pool Balance ⁽²⁾	\$1,181,871,508
Number of Mortgage Loans	47
Number of Mortgaged Properties	117
Average Cut-off Date Balance	\$25,146,202
Weighted Average Mortgage Rate	4.14039%
Weighted Average Remaining Term to Maturity/ARD (months) ⁽³⁾	107
Weighted Average Remaining Amortization Term (months) ⁽⁴⁾	345
Weighted Average Cut-off Date LTV Ratio ⁽⁵⁾	55.1%
Weighted Average Maturity Date/ARD LTV Ratio ⁽³⁾⁽⁵⁾	52.4%
Weighted Average UW NCF DSCR ⁽⁶⁾	2.50x
Weighted Average Debt Yield on Underwritten NOI ⁽⁷⁾	11.2%
% of Initial Pool Balance of Mortgage Loans that are Amortizing Balloon	12.6%
% of Initial Pool Balance of Mortgage Loans that are Interest Only then Amortizing Balloon	10.9%
% of Initial Pool Balance of Mortgage Loans that are Interest Only	76.5%
% of Initial Pool Balance of Mortgaged Properties with Single Tenants	21.0%
% of Initial Pool Balance of Mortgage Loans with Mezzanine Debt	6.4%
% of Initial Pool Balance of Mortgage Loans with Subordinate Debt	38.8%

(1) The Cut-off Date LTV Ratio, Maturity Date/ARD LTV Ratio, UW NCF DSCR, Debt Yield on Underwritten NOI and Cut-off Date Balance Per SF / Rooms information for each mortgage loan is presented in this Term Sheet (i) if such mortgage loan is part of a loan combination (as defined under “*Collateral Overview—Loan Combination Summary*” below), based on both that mortgage loan and any related pari passu companion loan(s) but, unless otherwise specifically indicated, without regard to any related subordinate companion loan(s), and (ii) unless otherwise specifically indicated, without regard to any other indebtedness (whether or not secured by the related mortgaged property, ownership interests in the related borrower or otherwise) that currently exists or that may be incurred by the related borrower or its owners in the future. The mortgage pool does not include, and the terms “mortgage loan” and “mortgage loans” (as used in this Term Sheet) are not intended to refer to, the Trust Subordinate Companion Loans.

(2) Subject to a permitted variance of plus or minus 5%.

(3) Unless otherwise indicated, mortgage loans with anticipated repayment dates are presented as if they were to mature on the anticipated repayment date.

(4) Excludes mortgage loans that are interest-only for the entire term.

(5) The Cut-off Date LTV Ratios and Maturity Date/ARD LTV Ratios presented in this Term Sheet are generally based on the “as-is” appraised values of the related mortgaged properties (as set forth on Annex A to the Preliminary Prospectus), provided that such LTV ratios may be calculated based on (a) (i) “as-stabilized” or similar values in certain cases where the completion of certain hypothetical conditions or other events at the property are assumed and/or where reserves have been established at origination to satisfy the applicable condition or event that is expected to occur, or (ii) the “as-is” appraised value for a portfolio of mortgaged properties may include a premium relating to the valuation of the portfolio of mortgaged as a whole rather than as the sum of individually valued mortgaged properties, , or (b) the Cut-off Date Balance or Balloon Balance, as applicable, net of a related earnout or holdback reserve, in each case as further described in the definitions of “Appraised Value”, “Cut-off Date LTV Ratio” and “Maturity Date/ARD LTV Ratio” under “Description of the Mortgage Pool—Certain Calculations and Definitions” in the Preliminary Prospectus.

(6) The UW NCF DSCR for each mortgage loan is generally calculated by dividing the UW NCF for the related mortgaged property or mortgaged properties by the annual debt service for such mortgage loan, as adjusted in the case of mortgage loans with a partial interest only period by using the first 12 amortizing payments due instead of the actual interest only payment due.

(7) The Debt Yield on Underwritten NOI for each mortgage loan is generally calculated as the related mortgaged property’s Underwritten NOI divided by the Cut-off Date Balance of such mortgage loan, and the Debt Yield on Underwritten NCF for each mortgage loan is generally calculated as the related mortgaged property’s Underwritten NCF divided by the Cut-off Date Balance of such mortgage loan; provided, that such Debt Yields may be calculated based on the Cut-off Date Balance net of a related earnout or holdback reserve, as further described in the definitions of “Debt

Yield on Underwritten NOI” and “Debt Yield on Underwritten NCF” under “*Description of the Mortgage Pool—Certain Calculations and Definitions*” in the Preliminary Prospectus.

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KEY FEATURES OF THE CERTIFICATES

Co-Lead Managers and Joint Bookrunners:	Citigroup Global Markets Inc. Deutsche Bank Securities Inc. J.P. Morgan Securities LLC
Co-Managers:	Drexel Hamilton, LLC Academy Securities, Inc.
Depositor:	Citigroup Commercial Mortgage Securities Inc.
Initial Pool Balance:	\$1,181,871,508
Master Servicer:	Midland Loan Services, a Division of PNC Bank, National Association
Special Servicer:	Midland Loan Services, a Division of PNC Bank, National Association (with respect to all serviced loans (other than the Woodlands Mall loan combination and The Centre loan combination)) Pacific Life Insurance Company (with respect to the Woodlands Mall loan combination) Trimont Real Estate Advisors, LLC (with respect to The Centre loan combination)
Certificate Administrator:	Citibank, N.A.
Trustee:	Wilmington Trust, National Association
Operating Advisor:	Pentalpha Surveillance, LLC
Asset Representations Reviewer:	Pentalpha Surveillance, LLC
Risk Retention Consultation Parties:	Citi Real Estate Funding Inc., Deutsche Bank AG, New York Branch and JPMorgan Chase Bank, National Association
Credit Risk Retention:	For a discussion on the manner in which the U.S. credit risk retention requirements are being satisfied by Citi Real Estate Funding Inc., as retaining sponsor for the securitization transaction constituted by the issuance of the Pooled Certificates, see " <i>Credit Risk Retention</i> " in the Preliminary Prospectus. Note that the securitization transaction constituted by the issuance of the Pooled Certificates is not structured to satisfy the EU risk retention and due diligence requirements.
Closing Date:	On or about August 8, 2019
Cut-off Date:	With respect to each mortgage loan, the due date in August 2019 for that mortgage loan(or, in the case of any mortgage loan that has its first due date subsequent to August 2019, the date that would have been its due date in August 2019 under the terms of that mortgage loan if a monthly payment were scheduled to be due in that month)
Determination Date:	The 11th day of each month or next business day, commencing in September 2019
Distribution Date:	The 4th business day after the Determination Date, commencing in September 2019
Interest Accrual:	Preceding calendar month

ERISA Eligible:	The offered certificates are expected to be ERISA eligible, subject to the exemption conditions described in the Preliminary Prospectus
SMMEA Eligible:	No
Payment Structure:	Sequential Pay
Day Count:	30/360
Tax Structure:	REMIC
Rated Final Distribution Date:	August 2052
Cleanup Call:	1.0%

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KEY FEATURES OF CERTIFICATES

Minimum Denominations:	\$10,000 minimum for the offered certificates (other than the Class X-A certificates); \$1,000,000 minimum for the Class X-A certificates; and integral multiples of \$1 thereafter for all the offered certificates
Delivery:	Book-entry through DTC
Bond Information:	Cash flows are expected to be modeled by TREPP, INTEX and BLOOMBERG

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TRANSACTION HIGHLIGHTS

■ \$1,040,209,000 (Approximate) New-Issue Multi-Borrower CMBS:

Overview: The mortgage pool consists of 47 fixed-rate commercial mortgage loans that have an aggregate Cut-off Date Balance of \$1,181,871,508 (the “**Initial Pool Balance**”), have an average mortgage loan Cut-off Date Balance of \$25,146,202 and are secured by 117 mortgaged properties located throughout 29 states.

- **LTV:** 55.1% weighted average Cut-off Date LTV Ratio
- **DSCR:** 2.50x weighted average Underwritten Debt Service Coverage Ratio
- **Debt Yield:** 11.2% weighted average Debt Yield on Underwritten NOI
- **Credit Support:** 30.000% credit support to Class A-1 / A-2 / A-3 / A-4 / A-5 / A-AB

■ Loan Structural Features:

- **Amortization:** 23.5% of the mortgage loans by Initial Pool Balance have scheduled amortization:
 - 12.6% of the mortgage loans by Initial Pool Balance have amortization for the entire term with a balloon payment due at maturity
 - 10.9% of the mortgage loans by Initial Pool Balance have scheduled amortization following a partial interest only period with a balloon payment due at maturity
- **Hard Lockboxes:** 60.1% of the mortgage loans by Initial Pool Balance have a Hard Lockbox in place
- **Cash Traps:** 99.8% of the mortgage loans by Initial Pool Balance have cash traps triggered by certain declines in cash flow, all at levels equal to or greater than (i) a 1.05x coverage or (ii) a 5.75% debt yield, that fund an excess cash flow reserve
- **Reserves:** The mortgage loans require amounts to be escrowed for reserves as follows:
 - **Real Estate Taxes:** 38 mortgage loans representing 69.2% of the Initial Pool Balance
 - **Insurance:** 16 mortgage loans representing 22.6% of the Initial Pool Balance
 - **Replacement Reserves (Including FF&E Reserves):** 36 mortgage loans representing 63.7% of the Initial Pool Balance
 - **Tenant Improvements / Leasing Commissions:** 22 mortgage loans representing 50.5% of the portion of the Initial Pool Balance that is secured by office, retail, industrial and mixed use properties
- **Predominantly Defeasance Mortgage Loans:** 60.5% of the mortgage loans by Initial Pool Balance permit defeasance only after an initial lockout period

■ Multiple-Asset Types > 5.0% of the Initial Pool Balance:

- **Office:** 31.9% of the mortgaged properties by allocated Initial Pool Balance are office properties
- **Retail:** 28.8% of the mortgaged properties by allocated Initial Pool Balance are retail properties (16.0% are anchored retail properties)

- **Mixed Use:** 13.1% of the mortgaged properties by allocated Initial Pool Balance are mixed use properties.
- **Multifamily:** 12.8% of the mortgaged properties by allocated Initial Pool Balance are multifamily properties
- **Hospitality:** 6.0% of the mortgaged properties by allocated Initial Pool Balance are hospitality properties
- **Geographic Diversity:** The 117 mortgaged properties are located throughout 29 states, with only two states having greater than 10.0% of the allocated Initial Pool Balance: California (20.6%) and New York (18.8%)

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COLLATERAL OVERVIEW

Mortgage Loans by Loan Seller

Mortgage Loan Seller	Mortgage Loans	Mortgaged Properties	Aggregate Cut-off Date Balance	% of Initial Pool Balance
Citi Real Estate Funding Inc. ⁽¹⁾	13	29	\$288,181,792	24.4%
German American Capital Corporation ⁽¹⁾	17	43	469,366,810	39.7
JPMorgan Chase Bank, National Association	17	45	424,322,905	35.9
Total	47	117	\$1,181,871,508	100.0%

Citi Real Estate Funding Inc. will transfer to the depositor The Centre Trust Subordinate Companion Loan and German American Capital Corporation

(1) will transfer to the depositor the Woodlands Mall Trust Subordinate Companion Loan, each of which will be an asset of the issuing entity but will not be included in the mortgage pool.

Ten Largest Mortgage Loans⁽¹⁾⁽²⁾

#	Mortgage Loan Name	Cut-off Date Balance	% of Initial Pool Balance	Property Type	Property Size SF/Units	Cut-off Date Balance Per SF/Unit	UW NCF DSCR	UW NOI Debt Yield	Cut-off Date LTV Ratio ⁽³⁾
1	30 Hudson Yards	\$93,200,000	7.9%	Office	1,463,234	765	3.45x	10.9%	50.9%
2	Woodlands Mall	76,200,000	6.4	Retail	758,231	327	3.95x	17.4%	26.0%
3	The Zappettini Portfolio	65,000,000	5.5	Office	251,575	477	1.83x	8.0%	64.0%
4	Montalvo Square	55,000,000	4.7	Retail	218,234	252	2.22x	9.0%	64.7%
5	Chemours HQ	50,400,000	4.3	Office	283,069	178	2.71x	11.3%	60.0%
6	Osborn Triangle	50,000,000	4.2	Mixed Use	676,947	635	3.12x	12.5%	37.1%
7	10000 Santa Monica Boulevard	50,000,000	4.2	Multifamily	281	782,918	2.34x	9.9%	39.8%
8	3 Columbus Circle	50,000,000	4.2	Office	753,713	650	2.91x	12.3%	45.4%
9	250 Livingston	50,000,000	4.2	Mixed Use	370,305	338	2.53x	9.4%	59.5%
10	Grand Canal Shoppes	50,000,000	4.2	Retail	759,891	1,000	2.46x	9.6%	46.3%
	Top 10 Total / Wtd. Avg.	\$589,800,000	49.9%				2.83x	11.2%	49.0%
	Remaining Total / Wtd. Avg.	592,071,508	50.1				2.17x	11.2%	61.3%
	Total / Wtd. Avg.	\$1,181,871,508	100.0%				2.50x	11.2%	55.1%

(1) See footnotes to table entitled "Mortgage Pool Characteristics" above.

With respect to each mortgage loan that is part of a loan combination (as identified under "Collateral Overview—Loan Combination Summary" below), the Cut-off Date Balance Per SF/Unit, UW NCF DSCR, UW NOI Debt Yield and Cut-off Date LTV Ratio are

(2) calculated based on both that mortgage loan and any related pari passu companion loan(s), but without regard to any related subordinate companion loan(s) or other indebtedness.

With respect to certain of the mortgage loans identified above, the Cut-off Date LTV Ratios have been calculated using "as-stabilized",

(3) "portfolio premium" or similar hypothetical values. Such mortgage loans are identified under the definition of "Appraised Value" set forth under "Description of the Mortgage Pool—Certain Calculations and Definitions" in the Preliminary Prospectus.

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COLLATERAL OVERVIEW (continued)

Loan Combination Summary

<u>Mortgaged Property Name⁽¹⁾</u>	<u>Mortgage Loan Cut-off Date Balance</u>	<u>Mortgage Loan as Approx. % of Initial Pool Balance</u>	<u>Aggregate Pari Passu Companion Loan Cut-off Date Balance</u>	<u>Aggregate Subordinate Companion Loan Cut-off Date Balance</u>	<u>Loan Combination Cut-off Date Balance</u>	<u>Controlling Pooling/Trust and Servicing Agreement ("Controlling PSA")⁽²⁾</u>	<u>Master Servicer / Outside Servicer</u>	<u>Special Servicer / Outside Special Servicer</u>
30 Hudson Yards	\$93,200,000	7.9%	\$1,026,800,000	\$310,000,000	\$1,430,000,000	HY 2019-30HY TSA	Wells Fargo	Situs
Woodlands Mall	\$76,200,000	6.4%	\$171,400,000	\$177,400,000	\$425,000,000	Benchmark 2019-B12 PSA	Midland	Pacific Life
The Zappettini Portfolio	\$65,000,000	5.5%	\$55,000,000	—	\$120,000,000	Benchmark 2019-B12 PSA	Midland	Midland
Osborn Triangle	\$50,000,000	4.2%	\$380,000,000	\$145,000,000	\$575,000,000	JPMCC 2019-OSB TSA	KeyBank	Situs
10000 Santa Monica Boulevard	\$50,000,000	4.2%	\$170,000,000	\$130,000,000	\$350,000,000	NCMS 2019-10K TSA	KeyBank	KeyBank
3 Columbus Circle	\$50,000,000	4.2%	\$440,000,000	\$105,000,000	\$595,000,000	Benchmark 2019-B10 PSA	KeyBank	LNR Partners
250 Livingston	\$50,000,000	4.2%	\$75,000,000	—	\$125,000,000	GSMS 2019-GC40 PSA	Midland	Midland
Grand Canal Shoppes	\$50,000,000	4.2%	\$710,000,000	\$215,000,000	\$975,000,000	MSC 2019-H7 PSA	Midland	LNR Partners
CIRE Equity Retail & Industrial Portfolio	\$50,000,000	4.2%	\$78,600,000	—	\$128,600,000	Benchmark 2019-B12 PSA	Midland	Midland
Waterfront Plaza	\$49,822,682	4.2%	\$74,734,023	—	\$124,556,704	GSMS 2019-GC40 PSA	Midland	Midland
2 MacArthur	\$34,000,000	2.9%	—	\$20,000,000	\$54,000,000	Benchmark 2019-B12 PSA	Midland	Midland
The Centre	\$30,000,000	2.5%	\$30,000,000	\$70,000,000	\$130,000,000	Benchmark 2019-B12 PSA	Midland	Trimont
Vie Portfolio	\$28,885,000	2.4%	\$46,500,000	—	\$75,385,000	JPMCC 2019-COR5 PSA	Midland	Midland
ICON Upper East Side Portfolio	\$25,000,000	2.1%	\$33,500,000	\$57,200,000	\$115,700,000	JPMCC 2019-ICON UES TSA	Midland	CWCcapital
SWVP Portfolio	\$15,000,000	1.3%	\$185,000,000	—	\$200,000,000	BBCMS 2019-C3 PSA	Midland	Midland
Greenleaf at Howell	\$10,000,000	0.8%	\$36,500,000	—	\$46,500,000	Benchmark 2019-B11 PSA	Midland	Rialto

(1) Each of the mortgage loans included in the issuing entity that is secured by a mortgaged property or portfolio of mortgaged properties identified in the table above, together with the related companion loan(s) (none of which is included in the issuing entity), is referred to in this Term Sheet as a "loan combination". See "Description of the Mortgage Pool—The Loan Combinations" in the Preliminary Prospectus.

(2) Each loan combination will be serviced under the related Controlling PSA and, in the event the Controlling Note is included in the related securitization transaction, the controlling class representative (or an equivalent entity) under such Controlling PSA will generally be entitled to exercise the rights of the controlling note holder for the subject loan combination. See, however, the chart entitled "Loan

Combination Controlling Notes and Non-Controlling Notes” below and “Description of the Mortgage Pool—The Loan Combinations” in the Preliminary Prospectus for information regarding the party that will be entitled to exercise such rights in the event the Controlling Note is held by a third party or included in a separate securitization transaction.

Mortgage Loans with Existing Mezzanine Debt or Subordinate Debt⁽¹⁾

<u>Mortgaged Property Name</u>	<u>Mortgage Loan Cut-off Date Balance</u>	<u>Aggregate Pari Passu Companion Loan Cut-off Date Balance</u>	<u>Aggregate Mezzanine Debt Cut-off Date Balance</u>	<u>Aggregate Subordinate Companion Loan Cut-off Date Balance</u>	<u>Cut-off Date Total Debt Balance⁽²⁾</u>	<u>Wtd. Avg Cut-off Date Total Debt Interest Rate⁽²⁾</u>	<u>Cut-off Date Mortgage Loan LTV⁽³⁾</u>	<u>Cut-off Date Total Debt LTV⁽²⁾</u>	<u>Cut-off Date Mortgage Loan UW NCF DSCR⁽³⁾</u>	<u>Cut-off Date Total Debt UW NCF DSCR⁽²⁾</u>	<u>Cut-off Date Mortgage Loan NOI Yield</u>
30 Hudson Yards	\$93,200,000	\$1,026,800,000	—	\$310,000,000	\$1,430,000,000	3.35000%	50.9%	65.0%	3.45x	2.51x	10.0%
Woodlands Mall	\$76,200,000	\$171,400,000	\$40,000,000	\$177,400,000	\$465,000,000	4.36301%	26.0%	48.8%	3.95x	1.79x	17.0%
Osborn Triangle	\$50,000,000	\$380,000,000	—	\$145,000,000	\$575,000,000	3.79700%	37.1%	49.7%	3.12x	2.33x	12.0%
10000 Santa Monica Boulevard	\$50,000,000	\$170,000,000	—	\$130,000,000	\$350,000,000	4.15000%	39.8%	63.3%	2.34x	1.47x	9.0%
3 Columbus Circle	\$50,000,000	\$440,000,000	—	\$105,000,000	\$595,000,000	3.91400%	45.4%	55.1%	2.91x	2.40x	12.0%
Grand Canal Shoppes	\$50,000,000	\$710,000,000	—	\$215,000,000	\$975,000,000	4.29411% ⁽⁴⁾	46.3%	59.5%	2.46x	1.67x	9.0%
2 MacArthur	\$34,000,000	—	—	\$20,000,000	\$54,000,000	3.57000% ⁽⁵⁾	40.0%	63.5%	5.79x	2.52x	14.0%
The Centre	\$30,000,000	\$30,000,000	—	\$70,000,000	\$130,000,000	4.48000%	31.9%	69.1%	2.26x	1.32x	13.0%
ICON Upper East Side Portfolio	\$25,000,000	\$33,500,000	—	\$57,200,000	\$115,700,000	4.50000%	29.1%	57.5%	2.63x	1.33x	12.0%

(1) See footnotes to table entitled “Mortgage Pool Characteristics” above.

(2) All “Total Debt” calculations set forth in the table above include any related pari passu companion loan(s), any related subordinate companion loan(s) and any related mezzanine debt.

(3) “Cut-off Date Mortgage Loan LTV”, “Cut-off Date Mortgage Loan UW NCF DSCR” and “Cut-off Date Mortgage Loan UW NOI Debt Yield” calculations include any related pari passu companion loan(s).

(4) The Wtd. Avg. Cut-off Date Total Debt Interest Rate for Grand Canal Shoppes has been rounded for presentation purposes. The full precision total debt interest rate is 4.29411076923077%.

(5) The Wtd. Avg. Cut-off Date Total Debt Interest Rate for 2 MacArthur has been rounded for presentation purposes. The full precision total debt interest rate is 3.5700000185185%.

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COLLATERAL OVERVIEW (continued)

Loan Combination Controlling Notes and Non-Controlling Notes⁽¹⁾⁽²⁾

Mortgaged Property Name	Servicing of Loan Combination	Note Detail	Controlling Note	Current Holder of Unsecuritized Note ⁽³⁾⁽⁴⁾⁽⁵⁾	Current or Anticipated Holder of Securitized Note ⁽⁴⁾	Aggregate Cut-off Date Balance
30 Hudson Yards	Outside Serviced	Notes A-1-C1, A-1-C2, A-1-C9, A-2-C1, A-3-S1, A-3-S2, A-3-S3, A-1-S1, A-1-S2, A-1-S3, A-2-S1, A-2-S2, A-2-S3	No	—	HY 2019-30HY ⁽⁶⁾	\$698,000,000
		Notes A-1-C3, A-1-C6, A-1-C7, A-1-C8	No	DBRI	Not Identified	\$160,000,000
		Notes A-1-C4, A-1-C5, A-1-C10	No	—	Benchmark 2019-B12	\$93,200,000
		Notes A-2-C2, A-2-C3, A-2-C4, A-2-C5	No	GSMC	Not Identified	\$84,400,000
		Notes A-3-C1, A-3-C2, A-3-C3, A-3-C4, A-3-C5	No	WFB	Not Identified	\$84,400,000
		Notes B-1, B-2, B-3	Yes (Note B-1)	—	HY 2019-30HY	\$310,000,000
Woodlands Mall	Serviced	Notes A-1-1, A-5, A-7	Control Shift Note (Note A-1-1) ⁽⁸⁾	—	Benchmark 2019-B12	\$76,200,000
		Notes A-1-2, A-2, A-3, A-4, A-6	No	DBRI	Not Identified	\$171,400,000
		Note B	Yes ⁽⁸⁾	—	Benchmark 2019-B12	\$177,400,000
The Zappettini Portfolio	Serviced	Note A-1	Yes	—	Benchmark 2019-B12	\$65,000,000
		Note A-2	No	CREFI	Not Identified	\$55,000,000
Osborn Triangle	Outside Serviced	Note A-1	Yes	—	JPMCC 2019-OSB	\$250,000,000
		Note A-2	No	—	Benchmark 2019-B12	\$50,000,000
		Notes A-3, A-4, A-5, A-6	No	JPMCB	Not Identified	\$130,000,000
		Note B-1	No	—	JPMCC 2019-OSB	\$145,000,000
10000 Santa Monica Boulevard	Outside Serviced	Note A-1	Control Shift Note ⁽⁸⁾	—	NCMS 2019-10K	\$100,000,000
		Notes A-2, A-5, A-7	No	Natixis	Not Identified	\$70,000,000
		Notes A-3, A-4, A-6	No	—	Benchmark 2019-B12	\$50,000,000

		Note A-B	Yes ⁽⁸⁾	—	NCMS 2019-10K	\$130,000,000
3 Columbus Circle	Outside Serviced	Notes A-1-1, A-2-1	Control Shift Note (Note A-1-1) ⁽⁸⁾	—	Benchmark 2019-B10	\$75,000,000
		Note A-1-2-A	No	—	JPMCC 2019-COR5	\$50,000,000
		Notes A-1-2-B, A-1-7	No	—	Benchmark 2019-B12	\$50,000,000
		Notes A-1-3, A-2-4	No	—	Benchmark 2019-B11	\$100,000,000
		Notes A-1-4, A-1-6, A-1-8	No	JPMCB	Not Identified	\$92,500,000
		Note A-1-5	No	—	CSAIL 2019-C16	\$50,000,000
		Notes A-2-2, A-2-3	No	—	CF 2019-CF1	\$50,000,000
		Note A-2-5-A	No	DBNY	Not Identified ⁽⁷⁾	\$12,500,000
		Note A-2-5-B	No	—	MSC 2019-H6	\$10,000,000
		Note B-1	Yes ⁽⁸⁾	—	Benchmark 2019-B10	\$51,450,000
		Note B-2	No	—	Benchmark 2019-B10	\$53,550,000
250 Livingston	Outside Serviced	Note A-1	Yes	—	GSMS 2019-GC40	\$75,000,000
		Note A-2	No	—	Benchmark 2019-B12	\$50,000,000
Grand Canal Shoppes	Outside Serviced	Notes A-1-1, A-1-6	Control Shift Note (Note A-1-1) ⁽⁸⁾	—	MSC 2019-H7 ⁽⁹⁾	\$70,000,000
		Notes A-1-2, A-1-3, A-1-4, A-1-5, A-1-7, A-1-8	No	MSBNA	Not Identified	\$163,846,154
		Notes A-2-1, A-2-2, A-2-3, A-2-4, A-2-5	No	WFB	Not Identified	\$175,384,615
		Note A-3-1	No	—	Benchmark 2019-B12	\$50,000,000
		Notes A-3-2, A-3-3, A-3-4, A-3-5	No	JPMCB	Not Identified	\$125,384,615
		Notes A-4-1, A-4-2, A-4-3, A-4-4, A-4-5	No	GSB	Not Identified	\$175,384,615
		Note B	Yes ⁽⁸⁾	Third party holder	Not Identified	\$215,000,000
CIRE Equity Retail & Industrial Portfolio	Serviced	Notes A-1, A-2-1	Yes (Note A-1)	—	Benchmark 2019-B12	\$50,000,000
		Notes A-2-2, A-3	No	DBNY	Not Identified ⁽⁷⁾	\$27,160,000
		Note A-4	No	—	WFCM 2019-C51	\$22,000,000
		Notes A-5, A-6	No	UBS AG	Not Identified	\$29,440,000
Waterfront Plaza	Outside Serviced	Notes A-1, A-3	Yes (Note A-1)	—	GSMS 2019-GC40	\$74,734,023
		Notes A-2, A-4	No	—	Benchmark 2019-B12	\$49,822,682

2 MacArthur	Serviced	Note A	Control Shift Note ⁽⁸⁾	—	Benchmark 2019-B12	\$34,000,000
		Note B	Yes ⁽⁸⁾	Principal Life Insurance Company	Not Identified	\$20,000,000
The Centre	Serviced	Note A-1	Control Shift Note ⁽⁸⁾	—	Benchmark 2019-B12	\$30,000,000
		Note A-2	No	CREFI	Not Identified	\$30,000,000
		Note B	Yes ⁽⁸⁾	—	Benchmark 2019-B12	\$70,000,000
Vie Portfolio	Outside Serviced	Note A-1	Yes	—	JPMCC 2019-COR5	\$29,000,000
		Note A-2	No	—	Benchmark 2019-B10	\$17,500,000
		Note A-3	No	—	Benchmark 2019-B12	\$28,885,000

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COLLATERAL OVERVIEW (continued)

<u>Mortgaged Property Name</u>	<u>Servicing of Loan Combination</u>	<u>Note Detail</u>	<u>Controlling Note</u>	<u>Current Holder of Unsecuritized Note⁽³⁾⁽⁴⁾⁽⁵⁾</u>	<u>Current or Anticipated Holder of Securitized Note⁽⁴⁾</u>	<u>Aggregate Cut-off Date Balance</u>
ICON Upper East Side Portfolio	Outside Serviced	Note A-1	Yes	—	JPMCC 2019-ICON UES	\$8,500,000
		Note A-2	No	—	JPMCC 2019-COR5	\$25,000,000
		Note A-3	No	—	Benchmark 2019-B12	\$25,000,000
		Note B	No	—	JPMCC 2019-ICON UES	\$57,200,000
SWVP Portfolio	Outside Serviced	Notes A-1, A-3	Yes (Note A-1)	—	BBCMS 2019-C3	\$45,000,000
		Notes A-2, A-4	No	—	CSAIL 2019-C16	\$40,000,000
		Notes A-5, A-6	No	Societe Generale	Not Identified	\$15,000,000
		Notes A-7, A-8	No	—	Benchmark 2019-B11	\$50,000,000
		Note A-9	No	—	JPMCC 2019-COR5	\$35,000,000
		Note A-10	No	—	Benchmark 2019-B12	\$15,000,000
Greenleaf at Howell	Outside Serviced	Note A-1-A	No	—	JPMCC 2019-COR5	\$10,000,000
		Note A-1-B	No	—	Benchmark 2019-B12	\$10,000,000
		Note A-2	Yes	—	Benchmark 2019-B11	\$26,500,000

The holder(s) of one or more specified controlling notes (collectively, the “**Controlling Note**”) will be the “controlling note holder(s)” (collectively, the “**Controlling Note Holder**”) entitled (directly or through a representative) to (a) approve or, in some cases, direct material servicing decisions involving (1) the related loan combination (while the remaining such holder(s) generally are only entitled to non-binding consultation rights in such regard), and (b) in some cases, replace the applicable special servicer with respect to such loan combination with or without cause. See “*Description of the Mortgage Pool—The Loan Combinations*” and “*The Pooling and Servicing Agreement—Directing Holder*” in the Preliminary Prospectus.

The holder(s) of the note(s) other than the Controlling Note (each, a “**Non-Controlling Note**”) will be the “non-controlling note holder(s)” generally entitled (directly or through a representative) to certain non-binding consultation rights with respect to any decisions as to which the holder of the Controlling Note has consent rights involving the related loan combination, subject to certain exceptions, including that in certain cases where the (2) related Controlling Note is a B-note, C-note or other subordinate note, such consultation rights will not be afforded to the holder(s) of the Non-Controlling Notes until after a control trigger event has occurred with respect to either such Controlling Note(s) or certain certificates backed thereby, in each case as set forth in the related co-lender agreement. See “*Description of the Mortgage Pool—The Loan Combinations*” in the Preliminary Prospectus.

Unless otherwise specified, with respect to each loan combination, any related unsecuritized Controlling Note and/or Non-Controlling Note may be further split, modified, combined and/or reissued (prior to its inclusion in a securitization transaction) as one or multiple Controlling Notes or Non-Controlling Notes, as the case may be, subject to the terms of the related co-lender agreement (including that the aggregate principal balance, weighted (3) average interest rate and certain other material terms cannot be changed). In connection with the foregoing, any such split, modified, combined or re-issued Controlling Note or Non-Controlling Note, as the case may be, may be transferred to one or multiple parties (not identified in the table above) prior to its inclusion in a future commercial mortgage securitization transaction.

Unless otherwise specified, with respect to each loan combination, each related unsecuritized pari passu companion loan (whether controlling or non-controlling) is expected to be contributed to one or more future commercial mortgage securitization transactions. Under the column “Current or Anticipated Holder of Securitized Note”, (i) the identification of a securitization trust means we have identified an outside securitization that has (4) closed or as to which a preliminary prospectus or final prospectus has been filed with the SEC that has included or is expected to include the subject Controlling Note or Non-Controlling Note, as the case may be, (ii) “Not Identified” means the subject Controlling Note or Non-Controlling Note, as the case may be, has not been securitized and no preliminary prospectus or final prospectus has been filed with the SEC that identifies the future outside securitization that is expected to include the subject Controlling Note or Non-Controlling Note, and (iii) “Not Applicable” means the subject Controlling

Note or Non-Controlling Note is not intended to be contributed to a future commercial mortgage securitization transaction. Under the column “Current Holder of Unsecuritized Note”, “—” means the subject Controlling Note or Non-Controlling Note is not an unsecuritized note and is currently held by the securitization trust referenced under the “Current or Anticipated Holder of Securitized Note” column.

(5) Entity names have been abbreviated for presentation.

“CREFI” represents Citi Real Estate Funding Inc.

“DBNY” represents Deutsche Bank, AG New York Branch.

“DBRI” represents DBR Investments Co. Limited.

“JPMCB” represents JPMorgan Chase Bank, National Association.

“WFB” represents Wells Fargo Bank, National Association.

“Natixis” represents Natixis Real Estate Capital LLC

“GSMC” represents Goldman Sachs Mortgage Company

“MSBNA” represents Morgan Stanley Bank, N.A.

“GSB” represents Goldman Sachs Bank USA

“UBS AG” represents UBS AG, by and through its branch office at 1285 Avenue of the Americas, New York, New York

(6) The HY 2019-30HY securitization transaction is scheduled to close on or about July 16, 2019.

(7) DBNY expects to transfer the related *pari passu* Companion Note to DBR Investments Co. Limited and contribute such notes to one or more future commercial mortgage securitization transactions.

The subject Loan Combination is an AB Loan Combination or a *Pari Passu*-AB Loan Combination, and the Controlling Note as of the date hereof (as identified in the chart above) is a related subordinate note. Upon the occurrence of certain trigger events specified in the related Co-Lender Agreement, however, control will generally shift to a more senior note (or, if applicable, first to one more senior note and, following certain additional trigger events, to another more senior note) in the subject Loan Combination (each identified in the chart above as a “Control Shift Note”), which more senior note

(8) will thereafter be the Controlling Note. See “*Description of the Mortgage Pool—The Loan Combinations—The Woodlands Mall Pari Passu-AB Loan Combination*”, “*—The Loan Combinations—The 10000 Santa Monica Boulevard Pari Passu-AB Loan Combination*”, “*—The Loan Combinations—The 3 Columbus Circle Pari Passu-AB Loan Combination*”, “*—The Loan Combinations—The Grand Canal Shoppes Pari Passu-AB Loan Combination*”, “*—The Loan Combinations—The 2 MacArthur Pari Passu-AB Loan Combination*” and “*—The Loan Combinations—The Centre Pari Passu-AB Loan Combination*” in the Preliminary Prospectus for more information regarding the manner in which control shifts under each such Loan Combination.

(9) The MSC 2019-H7 securitization transaction is scheduled to close on or about July 25, 2019.

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COLLATERAL OVERVIEW (continued)

Previously Securitized Mortgaged Properties⁽¹⁾

<u>Mortgaged Property Name</u>	<u>Mortgage Loan Seller</u>	<u>City</u>	<u>State</u>	<u>Property Type</u>	<u>Cut-off Date Balance / Allocated Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>	<u>Previous Securitization</u>
3 Columbus Circle	JPMCB	New York	New York	Office	\$50,000,000	4.2%	CGCMT 2015-GC29
250 Livingston	CREFI	Brooklyn	New York	Mixed Use	\$50,000,000	4.2%	GSMS 2013-GC12
Grand Canal Shoppes	JPMCB	Las Vegas	Nevada	Retail	\$50,000,000	4.2%	GSMS 2012-SHOP
Oakbrook Terrace	CREFI	Villa Park	Illinois	Office	\$19,225,645	1.6%	LCCM 2017-FL1
Hampton Inn Terre Haute	GACC	Terre Haute	Indiana	Hospitality	\$7,857,314	0.7%	COMM 2015-CCRE23
University Parkway Sarasota Self Storage	CREFI	Sarasota	Florida	Self Storage	\$7,000,000	0.6%	GSMS 2014-GC20
Meadow Woods Orlando Self Storage	CREFI	Orlando	Florida	Self Storage	\$6,900,000	0.6%	GSMS 2014-GC20
Cortez Bradenton Self Storage	CREFI	Bradenton	Florida	Self Storage	\$6,900,000	0.6%	GSMS 2014-GC20
Cheval Lutz Self Storage	CREFI	Lutz	Florida	Self Storage	\$6,750,000	0.6%	GSMS 2014-GC20
Waterford Lakes Orlando Self Storage	CREFI	Orlando	Florida	Self Storage	\$6,200,000	0.5%	GSMS 2014-GC20
Lockwood Sarasota Self Storage	CREFI	Sarasota	Florida	Self Storage	\$6,000,000	0.5%	GSMS 2014-GC20
Irvington Plaza	CREFI	Tucson	Arizona	Retail	\$5,735,000	0.5%	COMM 2014-UBS6
Central Park Shopping Center	GACC	Denver	Colorado	Retail	\$5,590,589	0.5%	COMM 2013-CCRE10
University View	JPMCB	Boca Raton	Florida	Multifamily	\$5,498,438	0.5%	UBSC 2011-C1
Compass Self Storage Jackson	CREFI	Jackson	Michigan	Self Storage	\$5,350,000	0.5%	GSMS 2014-GC20
Compass Self Storage Flat Rock	CREFI	Flat Rock	Michigan	Self Storage	\$5,000,000	0.4%	WFCM 2015-P2
Storage Pros Lansing	CREFI	Lansing	Michigan	Self Storage	\$4,350,000	0.4%	COMM 2015-CR27
Colonie	JPMCB	Amherst	New York	Multifamily	\$3,641,997	0.3%	JPMBB 2015-C30
Hillcrest Oakwood	JPMCB	Big Rapids	Michigan	Multifamily	\$3,609,428	0.3%	JPMBB 2015-C30
Southgate	JPMCB	State College	Pennsylvania	Multifamily	\$2,513,572	0.2%	JPMBB 2015-C30
359 South La Brea	JPMCB	Los Angeles	California	Retail	\$2,450,000	0.2%	GSMS 2014-GC24

(1) The table above includes mortgaged properties securing mortgage loans for which the most recent prior financing of all or a significant portion of such mortgaged properties was included in a securitization. Information under "Previous Securitization" represents the most recent such securitization with respect to each of those mortgaged properties. The information in the above table is based solely on information provided by the related borrower or obtained through searches of a third-party database, and has not otherwise been confirmed by the mortgage loan sellers.

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COLLATERAL OVERVIEW (continued)

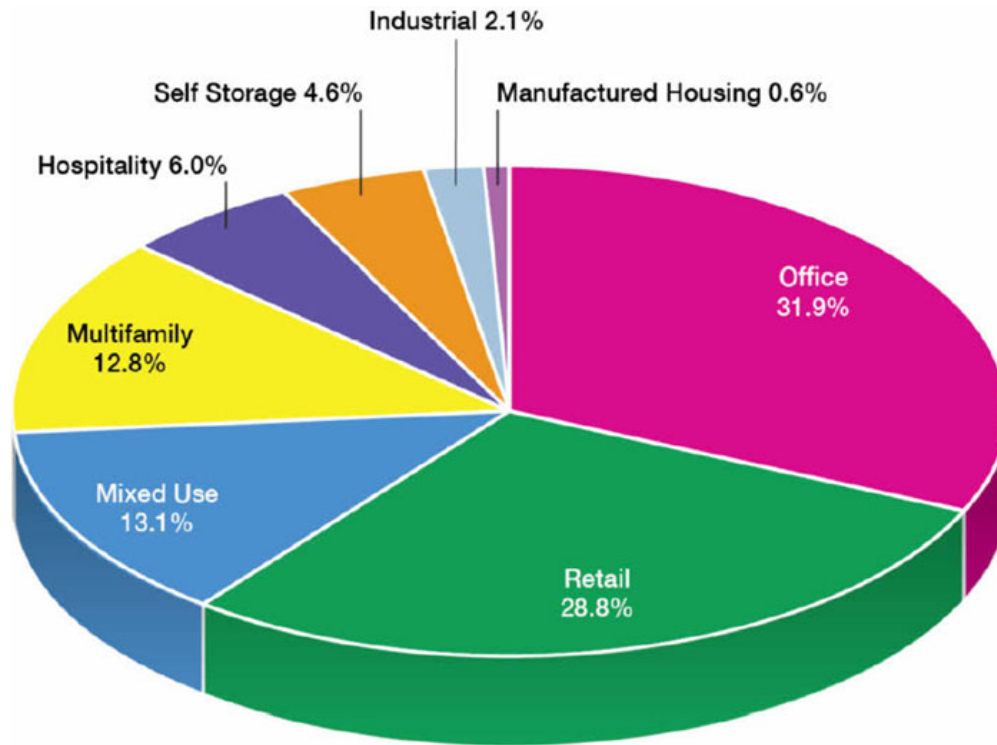
Property Types

Property Type / Detail	Number of Mortgaged Properties	Aggregate Cut-off Date Balance ⁽¹⁾	% of Initial Pool Balance ⁽¹⁾	Wtd. Avg. Underwritten NCF DSCR ⁽²⁾⁽³⁾	Wtd. Avg. Cut-off Date LTV Ratio ⁽²⁾⁽³⁾	Wtd. Avg. Debt Yield on Underwritten NOI ⁽²⁾⁽³⁾
Office	22	\$376,878,145	31.9%	2.91x	56.4%	11.2%
CBD	4	201,850,000	17.1	3.16x	51.8%	11.6%
Suburban	17	160,028,145	13.5	2.72x	61.0%	10.8%
Medical	1	15,000,000	1.3	1.50x	69.1%	9.4%
Retail	37	\$340,846,795	28.8%	2.48x	54.2%	11.4%
Anchored	15	188,521,795	16.0	2.00x	66.2%	9.8%
Super Regional Mall	1	76,200,000	6.4	3.95x	26.0%	17.4%
Specialty Retail	1	50,000,000	4.2	2.46x	46.3%	9.6%
Single Tenant Retail	20	26,125,000	2.2	1.69x	64.5%	9.1%
Mixed Use	9	\$155,224,583	13.1%	2.41x	55.7%	11.0%
Office/Multifamily	1	50,000,000	4.2	2.53x	59.5%	9.4%
Office/Laboratory	3	50,000,000	4.2	3.12x	37.1%	12.5%
Office/Retail	1	49,822,682	4.2	1.54x	73.3%	10.9%
Multifamily/Retail	3	4,105,445	0.3	2.63x	29.1%	12.2%
Multifamily/Office	1	1,296,456	0.1	2.63x	29.1%	12.2%
Multifamily	25	\$151,606,004	12.8%	2.21x	44.2%	11.1%
High Rise	2	80,000,000	6.8	2.31x	36.8%	11.1%
Garden	3	26,764,902	2.3	1.88x	59.9%	11.3%
Student Housing	5	25,243,003	2.1	1.90x	62.5%	9.9%
Mid Rise	15	19,598,099	1.7	2.63x	29.1%	12.2%
Hospitality	8	\$71,429,511	6.0%	2.07x	60.4%	13.0%
Full Service	5	38,000,000	3.2	2.19x	54.1%	13.0%
Limited Service	3	33,429,511	2.8	1.92x	67.5%	13.0%
Self Storage	9	\$54,450,000	4.6%	1.87x	68.3%	9.0%
Industrial	6	\$24,812,470	2.1%	1.73x	68.7%	10.6%
Warehouse/Distribution	5	17,812,470	1.5	1.78x	69.9%	10.6%
Flex	1	7,000,000	0.6	1.59x	65.7%	10.5%
Manufactured Housing	1	\$6,624,000	0.6%	2.04x	60.0%	13.3%
Total	117	\$1,181,871,508	100.0%	2.50x	55.1%	11.2%

(1) Calculated based on the mortgaged property's allocated loan amount for mortgage loans secured by more than one mortgaged property.

(2) Weighted average based on the mortgaged property's allocated loan amount for mortgage loans secured by more than one mortgaged property.

(3) See footnotes to the table entitled "Mortgage Pool Characteristics" above.



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COLLATERAL OVERVIEW (continued)

Geographic Distribution

<u>Property Location</u>	<u>Number of Mortgaged Properties</u>	<u>Aggregate Cut-off Date Balance⁽¹⁾</u>	<u>% of Initial Pool Balance⁽¹⁾</u>	<u>Aggregate Appraised Value⁽²⁾</u>	<u>% of Total Appraised Value</u>	<u>Underwritten NOI⁽²⁾⁽³⁾</u>	<u>% of Total Underwritten NOI</u>
California	20	\$242,924,214	20.6%	\$990,500,000	9.9%	\$46,232,764	8.8%
New York	23	221,841,997	18.8	3,706,800,000	37.0	202,610,461	38.5
Texas	4	109,035,323	9.2	1,017,600,000	10.1	47,008,405	8.9
Florida	12	82,841,813	7.0	193,350,000	1.9	13,270,975	2.5
Delaware	1	50,400,000	4.3	84,000,000	0.8	5,676,945	1.1
Massachusetts	3	50,000,000	4.2	1,158,000,000	11.5	53,734,416	10.2
Nevada	1	50,000,000	4.2	1,640,000,000	16.4	73,021,709	13.9
Hawaii	1	49,822,682	4.2	170,000,000	1.7	13,623,215	2.6
Arizona	6	48,088,460	4.1	128,460,000	1.3	9,269,300	1.8
Virginia	4	44,613,344	3.8	71,700,000	0.7	6,000,068	1.1
New Jersey	2	40,000,000	3.4	255,100,000	2.5	11,759,866	2.2
West Virginia	1	23,000,000	1.9	45,500,000	0.5	3,115,371	0.6
Michigan	9	22,899,466	1.9	44,005,000	0.4	3,152,158	0.6
Illinois	3	20,952,305	1.8	30,470,000	0.3	2,089,385	0.4
Iowa	7	20,100,842	1.7	28,790,000	0.3	1,884,534	0.4
Colorado	2	19,190,589	1.6	41,228,000	0.4	3,233,279	0.6
Maine	1	12,422,905	1.1	22,600,000	0.2	1,733,718	0.3
Indiana	3	9,792,578	0.8	16,780,000	0.2	1,495,815	0.3
Kansas	1	9,300,000	0.8	13,260,000	0.1	1,289,302	0.2
Oregon	1	8,240,157	0.7	31,100,000	0.3	2,010,947	0.4
Louisiana	1	7,972,500	0.7	170,000,000	1.7	11,948,124	2.3
Alabama	1	7,858,743	0.7	34,500,000	0.3	1,628,114	0.3
Minnesota	3	7,263,354	0.6	11,690,000	0.1	630,913	0.1
Wyoming	1	6,624,000	0.6	11,040,000	0.1	881,246	0.2
Ohio	1	5,450,000	0.5	8,200,000	0.1	805,355	0.2
North Carolina	2	4,252,500	0.4	90,200,000	0.9	7,209,900	1.4
Kentucky	1	3,650,000	0.3	5,000,000	0.0	413,859	0.1
Pennsylvania	1	2,513,572	0.2	9,500,000	0.1	894,128	0.2
Missouri	1	820,164	0.1	1,140,000	0.0	75,501	0.0
Total	117	\$1,181,871,508	100.0%	\$10,030,513,000	100.0%	\$526,699,773	100.0%

- (1) Calculated based on the mortgaged property's allocated loan amount for mortgage loans secured by more than one mortgaged property.
- (2) Aggregate Appraised Values and Underwritten NOI reflect the aggregate values without any reduction for the pari passu companion loan(s).
- (3) For multi-property loans that do not have underwritten cash flow information reported on a property level basis, Underwritten NOI is allocated based on each respective property's allocated loan amount.

COLLATERAL OVERVIEW (continued)

Distribution of Cut-off Date Balances

<u>Range of Cut-off Date Balances (\$)</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>
2,450,000 - 4,999,999	3	\$9,425,000	0.8%
5,000,000 - 9,999,999	10	69,418,814	5.9
10,000,000 - 19,999,999	15	211,580,012	17.9
20,000,000 - 29,999,999	4	98,075,000	8.3
30,000,000 - 39,999,999	3	103,750,000	8.8
40,000,000 - 49,999,999	1	49,822,682	4.2
50,000,000 - 93,200,000	11	639,800,000	54.1
Total	47	\$1,181,871,508	100.0%

Distribution of UW NCF DSCRs⁽¹⁾

<u>Range of UW DSCR (x)</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>
1.20 - 1.20	1	\$10,000,000	0.8%
1.21 - 1.50	4	61,300,000	5.2
1.51 - 2.00	17	290,842,103	24.6
2.01 - 2.50	14	371,494,405	31.4
2.51 - 3.00	5	181,135,000	15.3
3.01 - 5.79	6	267,100,000	22.6
Total	47	\$1,181,871,508	100.0%

(1) See footnotes (1) and (6) to the table entitled "Mortgage Pool Characteristics" above.

Distribution of Amortization Types⁽¹⁾

<u>Amortization Type</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>
Interest Only	27	\$903,817,500	76.5%
Interest Only, Then Amortizing ⁽²⁾	10	114,044,000	9.6
Amortizing (30 Years)	7	82,766,179	7.0
Amortizing (25 Years)	2	66,293,829	5.6
Interest Only, Then Amortizing – ARD	1	14,950,000	1.3
Total	47	\$1,181,817,500	100.0%

(1) All of the mortgage loans will have balloon payments at maturity date or have an anticipated repayment date, as applicable.

(2) Original partial interest only periods range from 24 to 60 months.

Distribution of Lockboxes

<u>Lockbox Type</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>
Hard	21	\$710,519,879	60.1%
Springing	21	362,775,984	30.7
Soft	5	108,575,645	9.2
Total	47	\$1,181,871,508	100.0%

Distribution of Cut-off Date LTV Ratios⁽¹⁾

<u>Range of Cut-off Date LTV (%)</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial</u>
--------------------------------------	---------------------------------	-----------------------------	---------------------

			Pool Balance
26.0 - 39.9	5	\$231,200,000	19.6%
40.0 - 49.9	4	136,450,000	11.5
50.0 - 59.9	8	210,597,905	17.8
60.0 - 69.9	21	459,542,803	38.9
70.0 - 75.0	9	144,080,799	12.2
Total	47	\$1,181,871,508	100.0%

(1) See footnotes (1) and (5) to the table entitled "Mortgage Pool Characteristics" above.

Distribution of Maturity Date/ARD LTV Ratios⁽¹⁾

Range of Maturity Date/ARD LTV (%)	Number of Mortgage Loans	Cut-off Date Balance	% of Initial Pool Balance
26.0 - 39.9	5	\$231,200,000	19.6%
40.0 - 49.9	5	152,921,147	12.9
50.0 - 59.9	16	336,530,546	28.5
60.0 - 67.0	21	461,219,814	39.0
Total	47	\$1,181,871,508	100.0%

(1) See footnotes (1), (3) and (5) to the table entitled "Mortgage Pool Characteristics" above.

Distribution of Loan Purpose

Loan Purpose	Number of Mortgage Loans	Cut-off Date Balance	% of Initial Pool Balance
Refinance	27	\$749,956,890	63.5%
Acquisition	17	388,214,618	32.8
Recapitalization	3	43,700,000	3.7
Total	47	\$1,181,871,508	100.0%

Distribution of Mortgage Rates

Range of Mortgage Rates (%)	Number of Mortgage Loans	Cut-off Date Balance	% of Initial Pool Balance
2.464 - 4.000	9	\$440,850,000	37.3%
4.001 - 4.500	23	536,990,092	45.4
4.501 - 5.000	9	112,416,197	9.5
5.001 - 5.500	5	61,615,219	5.2
5.501 - 5.682	1	30,000,000	2.5
Total	47	\$1,181,871,508	100.0%

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COLLATERAL OVERVIEW (continued)

Distribution of Debt Yield on Underwritten NOI⁽¹⁾

<u>Range of Debt Yields on Underwritten NOI (%)</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>
8.0 - 8.9	6	\$108,250,000	9.2%
9.0 - 9.9	10	338,575,000	28.6
10.0 - 10.9	8	253,061,444	21.4
11.0 - 14.9	21	397,535,063	33.6
15.0 - 17.4	2	84,450,000	7.1
Total	47	\$1,181,871,508	100.0%

(1) See footnotes (1) and (7) to the table entitled "Mortgage Pool Characteristics" above.

Distribution of Debt Yield on Underwritten NCF⁽¹⁾

<u>Range of Debt Yields on Underwritten NCF (%)</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>
7.8 - 7.9	1	\$10,000,000	0.8%
8.0 - 8.9	7	174,440,000	14.8
9.0 - 9.9	14	372,748,763	31.5
10.0 - 10.9	8	253,880,182	21.5
11.0 - 14.9	15	286,352,563	24.2
15.0 - 17.0	2	84,450,000	7.1
Total	47	\$1,181,871,508	100.0%

(1) See footnotes (1) and (7) to the table entitled "Mortgage Pool Characteristics" above.

Mortgage Loans with Original Partial Interest Only Periods

<u>Original Partial Interest Only Period (months)</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>
24	4	\$40,274,000	3.4%
36	3	\$35,870,000	3.0%
48	1	\$9,300,000	0.8%
60	3	\$43,550,000	3.7%

Distribution of Original Terms to Maturity/ARD⁽¹⁾

<u>Original Term to Maturity/ARD (months)</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>
60	7	\$176,730,219	15.0%
63	1	50,400,000	4.3
84	1	6,624,000	0.6
120	38	948,117,289	80.2
Total	47	\$1,181,871,508	100.0%

(1) See footnote (3) to the table entitled "Mortgage Pool Characteristics" above.

Distribution of Remaining Terms to Maturity/ARD⁽¹⁾

<u>Range of Remaining Terms to Maturity/ARD (months)</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>
57 - 60	7	\$176,730,219	15.0%
63	1	50,400,000	4.3
80 - 84	1	6,624,000	0.6
113 - 120	38	948,117,289	80.2
Total	47	\$1,181,871,508	100.0%

(1) See footnote (3) to the table entitled "Mortgage Pool Characteristics" above.

Distribution of Original Amortization Terms⁽¹⁾

<u>Original Amortization Term (months)</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>
Interest Only	27	\$903,817,500	76.5%
300	2	66,293,829	5.6
360	18	211,760,179	17.9
Total	47	\$1,181,871,508	100.0%

(1) All of the mortgage loans will have balloon payments at maturity or have an anticipated repayment date, as applicable.

Distribution of Remaining Amortization Terms⁽¹⁾

<u>Range of Remaining Amortization Terms (months)</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>
Interest Only	27	\$903,817,500	76.5%
297 - 300	2	66,293,829	5.6
355 - 360	18	211,760,179	17.9
Total	47	\$1,181,871,508	100.0%

(1) All of the mortgage loans will have balloon payments at maturity or have an anticipated repayment date, as applicable.

Distribution of Prepayment Provisions

<u>Prepayment Provision</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>
Defeasance	31	\$714,655,921	60.5%
Yield Maintenance	14	309,015,587	26.1
Defeasance or Yield Maintenance	2	158,200,000	13.4
Total	47	\$1,181,871,508	100.0%

Distribution of Escrow Types

<u>Escrow Type</u>	<u>Number of Mortgage Loans</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>
Real Estate Tax	38	\$817,296,508	69.2%
Replacement Reserves ⁽¹⁾	36	\$752,296,508	63.7%
TI/LC ⁽²⁾	22	\$463,135,092	50.5%
Insurance	16	\$266,691,792	22.6%

(1) Includes mortgage loans with FF&E reserves.

(2) Percentage of the portion of the Initial Pool Balance secured by office, retail, industrial and mixed use properties.

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SHORT TERM CERTIFICATE PRINCIPAL PAY DOWN SCHEDULE

Class A-2 Principal Pay Down⁽¹⁾⁽²⁾

<u>Mortgage Loan Name</u>	<u>Property Type</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>	<u>Remaining Loan Term</u>	<u>Underwritten NCF DSCR</u>	<u>Debt Yield on Underwritten NOI</u>	<u>Cut-off Date LTV Ratio</u>
The Zappettini Portfolio	Office	\$65,000,000	5.5%	58	1.83x	8.0%	64.0%
Chemours HQ	Office	\$50,400,000	4.3%	63	2.71x	11.3%	60.0%
2 MacArthur	Office	\$34,000,000	2.9%	59	5.79x	14.6%	40.0%
The Centre	Multifamily	\$30,000,000	2.5%	59	2.26x	13.2%	31.9%
ICON Upper East Side Portfolio	Various	\$25,000,000	2.1%	57	2.63x	12.2%	29.1%
Pegasus Landing	Multifamily	\$12,422,905	1.1%	58	2.06x	14.0%	55.0%
Hampton Inn Terre Haute	Hospitality	\$7,857,314	0.7%	58	1.93x	14.2%	68.3%
359 South La Brea	Retail	\$2,450,000	0.2%	59	1.55x	8.3%	44.5%

The table above presents the mortgage loans whose balloon payments would be applied to pay down the certificate balance of the Class A-2 certificates assuming no prepayments prior to the maturity date or any anticipated repayment date, as applicable, for any mortgage loan and applying the modeling assumptions described under “Yield, Prepayment and Maturity Considerations” in the Preliminary Prospectus, including the assumptions that (i) no mortgage loan in the pool experiences prepayments prior to its stated maturity date or anticipated repayment date, as applicable, or defaults or losses; (ii) there are no extensions of the maturity date of any mortgage loan in the pool; and (iii) each mortgage loan in the pool is paid in full on its stated maturity date or, if applicable, anticipated repayment date. Each class of certificates, including the Class A-2 certificates, evidences undivided ownership interests in the entire pool of mortgage loans. Debt service coverage ratio, debt yield and loan-to-value ratio information does not take into account any subordinate debt (whether or not secured by the mortgaged property) that currently exists or is allowed under the terms of any mortgage loan. See Annex A to the Preliminary Prospectus. See the footnotes to the table entitled “Mortgage Pool Characteristics” above.

(2) See footnotes to the table entitled “Mortgage Pool Characteristics” above.

Class A-3 Principal Pay Down⁽¹⁾⁽²⁾

<u>Mortgage Loan Name</u>	<u>Property Type</u>	<u>Cut-off Date Balance</u>	<u>% of Initial Pool Balance</u>	<u>Remaining Loan Term</u>	<u>Underwritten NCF DSCR</u>	<u>Debt Yield on Underwritten NOI</u>	<u>Cut-off Date LTV Ratio</u>
Targhee Place	Manufactured Housing	\$6,624,000	0.6%	82	2.04x	13.3%	60.0%

The table above presents the mortgage loans whose balloon payments would be applied to pay down the certificate balance of the Class A-3 certificates assuming no prepayments prior to the maturity date or any anticipated repayment date, as applicable, for any mortgage loan and applying the modeling assumptions described under “Yield, Prepayment and Maturity Considerations” in the Preliminary Prospectus, including the assumptions that (i) no mortgage loan in the pool experiences prepayments prior to its stated maturity date or anticipated repayment date, as applicable, or defaults or losses; (ii) there are no extensions of the maturity date of any mortgage loan in the pool; and (iii) each mortgage loan in the pool is paid in full on its stated maturity date or, if applicable, anticipated repayment date. Each class of certificates, including the Class A-3 certificates, evidences undivided ownership interests in the entire pool of mortgage loans. Debt service coverage ratio, debt yield and loan-to-value ratio information does not take into account any subordinate debt (whether or not secured by the mortgaged property) that currently exists or is allowed under the terms of any mortgage loan. See Annex A to the Preliminary Prospectus. See the footnotes to the table entitled “Mortgage Pool Characteristics” above.

(2) See footnotes to the table entitled “Mortgage Pool Characteristics” above.

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STRUCTURAL OVERVIEW (continued)

Allocation Between VRR Interest and Non-Vertically Retained Pooled Certificates

The aggregate amount available for distribution to holders of the Pooled Certificates (including the VRR Interest) on each distribution date will be: (i) the gross amount of interest, principal, yield maintenance charges and prepayment premiums collected with respect to the mortgage loans in the applicable one-month collection period, net of specified expenses of the issuing entity, including fees payable therefrom to, and losses, liabilities, advances (with interest thereon), costs and expenses reimbursable or indemnifiable therefrom to, the master servicer, the special servicer, the certificate administrator, the trustee, the operating advisor, the asset representations reviewer and CREFC[®]; and (ii) allocated to amounts available for distribution to the holders of the VRR Interest, on the one hand, and amounts available for distribution to the holders of the remaining Pooled Certificates (the “**Non-Vertically Retained Pooled Certificates**”), on the other hand. On each distribution date, the portion of such aggregate available funds allocable to: (a) the VRR Interest will be the product of such aggregate available funds multiplied by a fraction, expressed as a percentage, the numerator of which is the initial certificate balance of the VRR Interest, and the denominator of which is the aggregate initial certificate balance of all the classes of Pooled Principal Balance Certificates (the “**Vertically Retained Percentage**”); and (b) the Non-Vertically Retained Pooled Certificates will at all times be the product of such aggregate available funds multiplied by the difference between 100% and the Vertically Retained Percentage (such difference, the “**Non-Vertically Retained Percentage**”). See “*Credit Risk Retention*” and “*Description of the Certificates*” in the Preliminary Prospectus.

Distributions

On each Distribution Date, funds available for distribution to holders of the Non-Vertically Retained Pooled Certificates (exclusive of any portion thereof that represents the Non-Vertically Retained Percentage of (i) any yield maintenance charges and prepayment premiums collected on the mortgage loans and/or (ii) any excess interest accrued after the related anticipated repayment date on any mortgage loan with an anticipated repayment date) (“**Non-Vertically Retained Pooled Available Funds**”) will be distributed in the following amounts and order of priority (in each case to the extent of remaining available funds):

1. Class A-1, A-2, A-3, A-4, A-5, A-AB, X-A, X-B and X-D certificates: to interest on the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5, Class A-AB, Class X-A, Class X-B and Class X-D certificates, up to, and *pro rata* in accordance with, their respective interest entitlements.

2. Class A-1, A-2, A-3, A-4, A-5 and A-AB certificates: to the extent of Non-Vertically Retained Pooled Available Funds allocable to principal received or advanced on the mortgage loans, (i) to principal on the Class A-AB certificates until their certificate balance is reduced to the Class A-AB scheduled principal balance set forth in Annex F to the Preliminary Prospectus for the relevant Distribution Date, then (ii) to principal on the Class A-1 certificates until their certificate balance is reduced to zero, all funds available for distribution of principal remaining after the distributions to the Class A-AB certificates in clause (i) above, then (iii) to principal on the Class A-2 certificates until their certificate balance is reduced to zero, all funds available for distribution of principal remaining after the distributions to the Class A-1 certificates in clause (ii) above, then (iv) to principal on the Class A-3 certificates until their certificate balance is reduced to zero, all funds available for distribution of principal remaining after the distributions to the Class A-2 certificates in clause (iii) above, then (v) to principal on the Class A-4 certificates until their certificate balance is reduced to zero, all funds available for distribution of principal remaining after the distributions to the Class A-3 certificates in clause (iv) above, then (vi) to principal on the Class A-5 certificates

until their certificate balance is reduced to zero, all funds available for distribution of principal remaining after the distributions to the Class A-4 certificates in clause (v) above and then (vii) to principal on the Class A-AB certificates until their certificate balance is reduced to zero, all funds available for distribution of principal remaining after the distributions to the Class A-5 certificates in clause (vi) above. However, if the certificate balances of each and every class of the Class A-S, Class B, Class C, Class D, Class E, Class F-RR, Class G-RR and Class J-RR certificates have been reduced to zero as a result of the allocation of mortgage loan losses and other unanticipated expenses to those certificates, then Non-Vertically Retained Pooled Available Funds allocable to principal will be distributed to the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5 and Class A-AB certificates, *pro rata*, based on their respective certificate balances (and the schedule for the Class A-AB principal distributions will be disregarded).

- Class A-1, A-2, A-3, A-4, A-5 and A-AB certificates: to reimburse the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5 and Class A-AB certificates, *pro rata*,
3. for any unreimbursed losses on the mortgage loans that were previously allocated to reduce the certificate balances of those classes, together with interest at their respective pass-through rates.

- Class A-S certificates: (i) first, to interest on the Class A-S certificates in the amount of their interest entitlement; (ii) next, to the extent of Non-Vertically Retained Pooled Available Funds allocable to principal remaining after distributions in respect of principal to each class of Non-Vertically Retained Pooled Principal Balance Certificates with a higher principal payment priority (in this case, the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5 and Class A-AB certificates), to principal on the Class A-S certificates until their certificate balance is reduced to zero; and (iii) next, to reimburse the Class A-S certificates for any unreimbursed losses on the mortgage loans that were previously allocated to reduce the certificate balance of that class, together with interest at its pass-through rate.
- 4.

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STRUCTURAL OVERVIEW (continued)

Distributions

(continued)

Class B certificates: (i) first, to interest on the Class B certificates in the amount of their interest entitlement; (ii) next, to the extent of Non-Vertically Retained Pooled Available Funds allocable to principal remaining after distributions in respect of principal to each class of Non-Vertically Retained Pooled Principal Balance Certificates with a higher principal payment priority (in this case, the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5, Class A-AB and Class A-S certificates), to principal on the Class B certificates until their certificate balance is reduced to zero; and (iii) next, to reimburse Class B certificates for any unreimbursed losses on the mortgage loans that were previously allocated to reduce the certificate balance of that class, together with interest at its pass-through rate.

- 5.

Class C certificates: (i) first, to interest on the Class C certificates in the amount of their interest entitlement; (ii) next, to the extent of Non-Vertically Retained Pooled Available Funds allocable to principal remaining after distributions in respect of principal to each class of Non-Vertically Retained Pooled Principal Balance Certificates with a higher principal payment priority (in this case, the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5, Class A-AB, Class A-S and Class B certificates), to principal on the Class C certificates until their certificate balance is reduced to zero; and (iii) next, to reimburse the Class C certificates for any unreimbursed losses on the mortgage loans that were previously allocated to reduce the certificate balance of that class, together with interest at its pass-through rate.

- 6.

After the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5, Class A-AB, Class X-A, Class X-B, Class X-D, Class A-S, Class B and Class C certificates are paid all amounts to which they are entitled on such Distribution Date, the remaining Non-Vertically Retained Pooled Available Funds will be used to pay interest and principal and to reimburse (with interest) any unreimbursed losses to the Class D, Class E, Class F-RR, Class G-RR and Class J-RR certificates, sequentially in that order and with respect to each such class in a manner analogous to the Class C certificates pursuant to clause 6 above.

- 7.

No class of Pooled Certificates will be entitled to distributions from amounts paid or advanced on and allocable to the Trust Subordinate Companion Loans, and such amounts will not be included in the Non-Vertically Retained Pooled Available Funds.

The holders of the Woodlands Mall Loan-Specific Certificates will only be entitled to distributions from amounts paid or advanced on and allocated to the Woodlands Mall Trust Subordinate Companion Loan in accordance with the co-lender agreement relating to the Woodlands Mall loan combination. The holders of the Centre Loan-Specific Certificates will only be entitled to distributions from amounts paid or advanced on and allocated to The Centre Trust Subordinate Companion Loan in accordance with the co-lender agreement relating to The Centre loan combination.

The certificate balances of the Pooled Principal Balance Certificates will each be reduced without distribution on any Distribution Date as a write-off to the extent of any loss realized on the mortgage loans allocated to such class on such Distribution Date. On each Distribution Date, the Vertically Retained Percentage of any such losses will be applied to the VRR Interest until the related certificate balance is reduced to zero, and the Non-Vertically Retained Percentage of any such losses will be applied to the respective classes of Non-Vertically Retained Pooled Principal Balance Certificates in the following order, in each case until the related certificate balance is reduced to

Realized Losses

zero: first, to the Class J-RR certificates; second, to the Class G-RR certificates; third, to the Class F-RR certificates; fourth, to the Class E certificates; fifth, to the Class D certificates; sixth, to the Class C certificates; seventh, to the Class B certificates; eighth, to the Class A-S certificates; and, finally *pro rata*, to the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5 and Class A-AB certificates, based on their then current respective certificate balances. The notional amount of each class of Pooled Class X Certificates will be reduced to reflect reductions in the certificate balance(s) of the class (or classes, as applicable) of Corresponding Pooled Principal Balance Certificates as a result of allocations of losses realized on the mortgage loans to such class(es) of Pooled Principal Balance Certificates.

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STRUCTURAL OVERVIEW (continued)

Prepayment Premiums and Yield Maintenance Charges

On each Distribution Date, until the notional amounts of the Class X-A, Class X-B and Class X-D certificates and the certificate balances of the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5, Class A-AB, Class A-S, Class B, Class C, Class D and Class E certificates have been reduced to zero, the Non-Vertically Retained Percentage of each yield maintenance charge collected on the mortgage loans during the related one-month collection period (or, in the case of an outside serviced mortgage loan, that accompanied a principal prepayment included in the aggregate pooled available funds for such Distribution Date) is required to be distributed to holders of the Pooled Certificates (excluding holders of the Class F-RR, Class G-RR, Class J-RR, Class S and Class R certificates and the VRR Interest) as follows: (a) first the Non-Vertically Retained Percentage of such yield maintenance charge will be allocated between (i) the group (the “**YM Group A**”) of the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5, Class A-AB, Class X-A and Class A-S certificates, (ii) the group (the “**YM Group BC**”) of the Class X-B, Class B and Class C certificates and (iii) the group (the “**YM Group DE**”) and, together with the YM Group A and the YM Group BC, the “**YM Groups**”) of the Class X-D, Class D and Class E certificates, *pro rata*, based upon the aggregate amount of principal distributed to the class or classes of Non-Vertically Retained Pooled Principal Balance Certificates in each YM Group on such Distribution Date, and (b) then the portion of such yield maintenance charge allocated to each YM Group will be further allocated as among the classes of certificates in such YM Group, in the following manner: (i) each class of Non-Vertically Retained Pooled Principal Balance Certificates in such YM Group will entitle the applicable certificateholders to receive on the applicable Distribution Date that portion of such yield maintenance charge equal to the product of (X) a fraction whose numerator is the amount of principal distributed to such class of Non-Vertically Retained Pooled Principal Balance Certificates on such Distribution Date and whose denominator is the total amount of principal distributed to all of the Non-Vertically Retained Pooled Principal Balance Certificates in that YM Group on such Distribution Date, (Y) the Base Interest Fraction (as defined in the Preliminary Prospectus) for the related principal prepayment and such class of Non-Vertically Retained Pooled Principal Balance Certificates, and (Z) the portion of such yield maintenance charge allocated to such YM Group, and (ii) the portion of such yield maintenance charge allocated to such YM Group and remaining after such distributions with respect to the Non-Vertically Retained Pooled Principal Balance Certificates in such YM Group will be distributed to the class of Pooled Class X Certificates in such YM Group. If there is more than one class of Non-Vertically Retained Pooled Principal Balance Certificates in any YM Group entitled to distributions of principal on any particular Distribution Date on which yield maintenance charges are distributable to such classes, the aggregate portion of such yield maintenance charges allocated to such YM Group will be allocated among all such classes of Non-Vertically Retained Pooled Principal Balance Certificates up to, and on a *pro rata* basis in accordance with, their respective entitlements in those yield maintenance charges in accordance with the prior sentence of this paragraph.

If a prepayment premium (calculated as a percentage of the amount prepaid) is imposed in connection with a prepayment rather than a yield maintenance charge, then the prepayment premium so collected will be allocated as described above. For this purpose, the discount rate used to calculate the Base Interest Fraction will be the discount rate used to determine the yield maintenance charge for mortgage loans that require payment at the greater of a yield maintenance charge or a minimum amount equal to a fixed percentage of the principal balance of the mortgage loan or, for mortgage loans that only have a prepayment premium based on a fixed percentage of the principal balance of the mortgage loan, such other discount rate as may be specified in the related loan documents.

After the notional amounts of the Class X-A, Class X-B and Class X-D certificates and the certificate balances of the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5, Class A-AB, Class A-S, Class B, Class C, Class D and Class E certificates have been reduced to zero, the Non-Vertically Retained Percentage of all prepayment premiums and yield maintenance charges with respect to the mortgage loans will be allocated among the holders of the Class F-RR, Class G-RR and Class J-RR certificates as provided in the Benchmark 2019-B12 pooling and servicing agreement. No yield maintenance charges or prepayment premiums will be distributed to the holders of the Class S or Class R certificates. For a description of prepayment premiums and yield maintenance charges required on the mortgage loans, see Annex A to the Preliminary Prospectus. See also “*Certain Legal Aspects of the Mortgage Loans—Default Interest and Limitations on Prepayments*” in the Preliminary Prospectus.

Any yield maintenance charges or prepayment premiums payable in respect of a Trust Subordinate Companion Loan will be distributed to holders of the related Loan-Specific Certificates.

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STRUCTURAL OVERVIEW (continued)

Advances

The master servicer and, if it fails to do so, the trustee, will be obligated to make P&I advances with respect to each mortgage loan and Trust Subordinate Companion Loan in the issuing entity and, with respect to all of the mortgage loans and Trust Subordinate Companion Loans serviced under the Benchmark 2019-B12 pooling and servicing agreement, servicing advances, including paying delinquent property taxes, condominium assessments, insurance premiums and ground lease rents, but only to the extent that those advances are not deemed non-recoverable from collections on the related mortgage loan and/or Trust Subordinate Companion Loan and, in the case of servicing advances, any other related companion loans as described below. P&I advances are subject to reduction in connection with any appraisal reductions that may occur. The special servicer will have no obligation to make any advances, provided that, in an urgent or emergency situation requiring the making of a property protection advance, the special servicer may, in its sole discretion, make a property protection advance and will be entitled to reimbursement from the master servicer for such advance. The master servicer, the special servicer and the trustee will each be entitled to receive interest on advances they make at the prime rate, compounded annually.

Serviced Mortgage Loans/Outside Serviced Mortgage Loans

One or more loan combinations each constitutes an **“outside serviced loan combination”** (as identified under *“Collateral Overview—Loan Combination Summary”* above), in which case, the BMARK 2019-B12 pooling and servicing agreement is not the Controlling PSA, and each related mortgage loan constitutes an **“outside serviced mortgage loan,”** each related companion loan constitutes an **“outside serviced companion loan,”** and each related Controlling PSA constitutes an **“outside servicing agreement.”**

One or more loan combinations may be identified in the Preliminary Prospectus as a **“servicing shift loan combination”**, in which case the related mortgage loan constitutes a **“servicing shift mortgage loan”** and each related companion loan constitutes a **“servicing shift companion loan”**. Any servicing shift loan combination will initially be serviced pursuant to the Benchmark 2019-B12 pooling and servicing agreement during which time such mortgage loan, such loan combination and each related companion loan will be a serviced mortgage loan, a serviced loan combination and a serviced companion loan (each as defined below), respectively. However, upon the inclusion of the related controlling pari passu companion loan in a future securitization transaction, the servicing of such mortgage loan will shift to the servicing agreement governing such securitization transaction, and such mortgage loan, such loan combination and each related companion loan will be an outside serviced mortgage loan, an outside serviced loan combination and an outside serviced companion loan, respectively.

All of the mortgage loans transferred to the issuing entity (other than any outside serviced mortgage loan) are sometimes referred to in this Term Sheet as the **“serviced mortgage loans”** and, together with any related companion loans, as the **“serviced loans”** (which signifies that they are being serviced by the master servicer and the special servicer under the Benchmark 2019-B12 pooling and servicing agreement); each related loan combination constitutes a **“serviced loan combination”**; and each related companion loan constitutes a **“serviced companion loan.”** See *“Description of the Mortgage Pool—The Loan Combinations”* in the Preliminary Prospectus.

Appraisal Reduction Amounts

An Appraisal Reduction Amount generally will be created with respect to a required appraisal loan (which is a serviced loan as to which certain defaults, modifications or insolvency events have occurred (as further described in the Preliminary Prospectus)) in the amount, if any, by which the principal balance of such required appraisal loan,

plus other amounts overdue or advanced in connection with such required appraisal loan, exceeds 90% of the appraised value of the related mortgaged property plus certain escrows and reserves (including letters of credit) held with respect to such required appraisal loan; provided that, if so provided in the related co-lender agreement, the holder of a subordinate companion loan may be permitted to post cash or a letter of credit to offset some or all of an Appraisal Reduction Amount. In the case of an outside serviced mortgage loan, any Appraisal Reduction Amounts will be calculated pursuant to, and by a party to, the related outside servicing agreement. In general, any Appraisal Reduction Amount calculated with respect to a loan combination will be allocated *first*, to any related subordinate companion loan(s) (including, if applicable, a related Trust Subordinate Companion Loan) (up to the outstanding principal balance(s) thereof), and *then*, to the related mortgage loan and any related pari passu companion loan(s) on a *pro rata* basis in accordance with their respective outstanding principal balances. As a result of an Appraisal Reduction Amount being calculated for and/or allocated to a given mortgage loan, the interest portion of any P&I advance for such mortgage loan will be reduced, which (to the extent of the Non-Vertically Retained Percentage of such reduction) will have the effect of reducing the amount of interest available to the most subordinate class(es) of Pooled Certificates (exclusive of the Class S certificates) then outstanding (*i.e.*, first, to the Class J-RR certificates, then, to the Class G-RR certificates, then, to the Class F-RR certificates, then, to the Class E certificates, then, to the Class D certificates, then, to the Class C certificates, then, to the Class B certificates, then, to the Class A-S certificates, and then, *pro rata* based on interest entitlements, to the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5, Class A-AB, Class X-A, Class X-B and Class X-D certificates). In general, a serviced loan will cease to be a required appraisal loan, and no longer be subject to an Appraisal Reduction Amount, when the same has ceased to be a specially serviced loan (if applicable), has been brought current for at least three consecutive months and no other circumstances exist that would cause such serviced loan to be a required appraisal loan.

As a result of calculating an Appraisal Reduction Amount that is allocated to a Trust Subordinate Companion Loan, the amount of any required P&I Advance with respect to such Trust Subordinate Companion Loan will be reduced, which will have the effect of reducing the amount of interest available to the related Loan-Specific Certificates then-outstanding, generally in reverse sequential order of payment priority.

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STRUCTURAL OVERVIEW (continued)

Appraisal Reduction Amounts (continued)

For various purposes under the Benchmark 2019-B12 pooling and servicing agreement (including, with respect to the Non-Vertically Retained Pooled Principal Balance Certificates, for purposes of determining the Non-Reduced Certificates and the Controlling Class, as well as the occurrence of a Control Termination Event and an Operating Advisor Consultation Trigger Event), the Vertically Retained Percentage of any Appraisal Reduction Amounts in respect of or allocated to the mortgage loans will be allocated to notionally reduce the certificate balance of the VRR Interest, and the Non-Vertically Retained Percentage of any Appraisal Reduction Amounts in respect of or allocated to the mortgage loans will be allocated to notionally reduce the certificate balances of the Pooled Principal Balance Certificates as follows: first, to the Class J-RR, Class G-RR, Class F-RR, Class E, Class D, Class C, Class B and Class A-S certificates, in that order, in each case until the related certificate balance is notionally reduced to zero; and then to the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5 and Class A-AB certificates, *pro rata* based on certificate balance.

For various purposes under the Benchmark 2019-B12 pooling and servicing agreement, any Appraisal Reduction Amount allocated to a Trust Subordinate Companion Loan will be allocated to notionally reduce the certificate balances of the related Loan-Specific Principal Balance Certificates.

Cumulative Appraisal Reduction Amounts

A “**Cumulative Appraisal Reduction Amount**”, as of any date of determination, is equal to the sum of (i) all Appraisal Reduction Amounts then in effect, and (ii) with respect to any AB Modified Loans, any Collateral Deficiency Amounts then in effect.

“**Collateral Deficiency Amount**” means, with respect to any AB Modified Loan as of any date of determination, the excess of (i) the stated principal balance of such AB Modified Loan (taking into account the related junior note(s) included therein), over (ii) the sum of (in the case of a loan combination, solely to the extent allocable to the subject mortgage loan or Trust Subordinate Companion Loan) (x) the most recent appraised value for the related mortgaged property or mortgaged properties, plus (y) solely to the extent not reflected or taken into account in such appraised value and to the extent on deposit with, or otherwise under the control of, the lender as of the date of such determination, any capital or additional collateral contributed by the related borrower at the time the mortgage loan or Trust Subordinate Companion Loan became (and as part of the modification related to) such AB Modified Loan for the benefit of the related mortgaged property or mortgaged properties (provided, that in the case of an outside serviced mortgage loan, the amounts set forth in this clause (y) will be taken into account solely to the extent relevant information is received), plus (z) any other escrows or reserves (in addition to any amounts set forth in the immediately preceding clause (y)) held by the lender in respect of such AB Modified Loan as of the date of such determination. For purposes of determining the identity of the Controlling Class and the existence of a Control Termination Event and an Operating Advisor Consultation Trigger Event, the Non-Vertically Retained Percentage of Collateral Deficiency Amounts will be allocable to the respective classes of Control Eligible Certificates (as defined below), in reverse alphabetical order of class designation, in a manner similar to the allocation of Appraisal Reduction Amounts to such classes.

“**AB Modified Loan**” means any corrected mortgage loan or Trust Subordinate Companion Loan (1) that became a corrected mortgage loan (which includes for purposes of this definition any outside serviced mortgage loan that became a “corrected” mortgage loan (or any term substantially similar thereto) pursuant to the related outside servicing agreement) due to a modification thereto that resulted in the

creation of an A/B note structure (or similar structure) and as to which the new junior note(s) did not previously exist or the principal amount of the new junior note(s) was previously part of either an A note held by the trust or the original unmodified mortgage loan or a Trust Subordinate Companion Loan and (2) as to which an Appraisal Reduction Amount is not in effect.

Age of Appraisals

Appraisals (which can be an update of a prior appraisal) with respect to a serviced loan are required to be no older than 9 months for purposes of determining appraisal reductions (other than the annual re-appraisal), market value, and other calculations as described in the Preliminary Prospectus.

Sale of Defaulted Loans

There will be no “Fair Market Value Purchase Option”. Instead defaulted mortgage loans and Trust Subordinate Companion Loans will be sold in a process similar to the sale process for REO property. With respect to an outside serviced loan combination, the party acting as special servicer with respect to such outside serviced loan combination pursuant to the related outside servicing agreement (the “**outside special servicer**”) may offer to sell to any person (or may offer to purchase) for cash such outside serviced loan combination in accordance with the terms of the related outside servicing agreement during such time as such outside serviced loan combination constitutes a defaulted mortgage loan qualifying for sale thereunder and, in connection with any such sale, the related outside special servicer is required to sell both the applicable outside serviced mortgage loan and the related outside serviced pari passu companion loan(s) and, if so provided in the related co-lender agreement or the Controlling PSA, any related subordinate companion loan(s), together as one defaulted loan.

Directing Holder

The “**Directing Holder**” with respect to any mortgage loan or loan combination serviced under the Benchmark 2019-B12 pooling and servicing agreement will be:

- except (i) in the case of the Woodlands Mall loan combination prior to the occurrence and continuance of a control appraisal period with respect to such loan combination (a “**Woodlands Mall Control Appraisal Period**”), (ii) in the case of The Centre loan combination prior to the occurrence and continuance of a control appraisal period with respect to such loan combination (a “**Centre Control Appraisal Period**”), (iii) with respect to an excluded mortgage loan, (iv) with respect to a serviced loan combination as to which the Controlling Note is held outside the issuing entity (sometimes referred to in this Term Sheet as a “**serviced outside controlled**”

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STRUCTURAL OVERVIEW (continued)

loan combination”), and (v) during any period that a Control Termination Event has occurred and is continuing, the Controlling Class Representative;

with respect to any serviced outside controlled loan combination (which may include a servicing shift loan combination or a serviced loan combination with a controlling subordinate companion loan held outside the issuing entity), if and for so long as

- such holder is entitled under the related co-lender agreement to exercise consent rights similar to those entitled to be exercised by the Controlling Class Representative, the holder of the related Controlling Note (during any such period, the “**outside controlling note holder**”);

with respect to the Woodlands Mall loan combination so long as it is not an excluded mortgage loan (i) for so long as no Woodlands Mall Control Appraisal Period exists,

- the Woodlands Mall Controlling Class Representative and (ii) for so long as a Woodlands Mall Control Appraisal Period exists and a Control Termination Event has not occurred and is continuing, the Controlling Class Representative; and

with respect to The Centre loan combination so long as it is not an excluded mortgage loan (i) for so long as no Centre Control Appraisal Period exists, the Centre

- Controlling Class Representative and (ii) for so long as a Centre Control Appraisal Period exists and a Control Termination Event has not occurred and is continuing, the Controlling Class Representative.

The applicable directing holder (or equivalent party) with respect to any outside serviced mortgage loan will be, in general, (i) in the event the related Controlling Note is included in the subject outside securitization transaction, the controlling class representative (or equivalent entity) under the related outside servicing agreement, and (ii) in all other cases, the third party holder of the related Controlling Note or its representative (which may be a controlling class representative (or equivalent entity) under a separate securitization transaction to which such note has been transferred), as provided in the related co-lender agreement.

An “**excluded mortgage loan**” is a mortgage loan or loan combination with respect to which the Controlling Class Representative or the holder(s) of more than 50% of the Controlling Class (by certificate balance) (or, (i) with respect to the Woodlands Mall loan combination so long as a Woodlands Mall Control Appraisal Period does not exist, the Woodlands Mall Controlling Class Representative or the holder(s) of more than 50% of the Woodlands Mall Controlling Class (by certificate balance), and (ii) with respect to The Centre loan combination so long as a Centre Control Appraisal Period does not exist, the Centre Controlling Class Representative or the holder(s) of more than 50% of the Centre Controlling Class (by certificate balance)) is (or are) a Borrower Party (as defined in the Preliminary Prospectus).

The “**Controlling Class Representative**” will be the controlling class certificateholder or other representative designated by holders of at least a majority of the controlling class of Pooled Certificates by certificate balance. The “**Controlling Class**” with respect to the Pooled Certificates is, as of any time of determination, the most subordinate class of the Control Eligible Certificates that has an aggregate outstanding certificate balance as notionally reduced by any portion of the Cumulative Appraisal Reduction Amount allocable to such class, at least equal to 25% of the initial certificate balance of that class of certificates; provided that (except under the circumstances set forth in the next proviso) if no such class meets the preceding requirement, then the Class F-RR certificates will be the controlling class; provided, further, however, that if, at any time, the aggregate outstanding certificate balance of the classes of

Controlling Class Representative

Non-Vertically Retained Pooled Principal Balance Certificates senior to the Control Eligible Certificates has been reduced to zero (without regard to the allocation of any Cumulative Appraisal Reduction Amounts), then the “Controlling Class” will be the most subordinate class of Control Eligible Certificates with an outstanding certificate balance greater than zero (without regard to the allocation of any Cumulative Appraisal Reduction Amounts). The **“Control Eligible Certificates”** consist of the Class F-RR, Class G-RR and Class J-RR certificates. See *“The Pooling and Servicing Agreement—Directing Holder”* in the Preliminary Prospectus. No other class of certificates will be eligible to act as the controlling class or appoint a Controlling Class Representative. No person may exercise any of the rights and powers of the Controlling Class Representative with respect to an excluded mortgage loan.

On the Closing Date, (i) KKR Real Estate Credit Opportunity Partners II L.P., a Delaware limited partnership, is expected to purchase the Class F-RR, Class G-RR and Class J-RR certificates and will also receive the Class S certificates, and (ii) KKR Real Estate Credit Opportunity Partners II L.P. (or an affiliate) is expected to be appointed the initial Controlling Class Representative.

The **“Woodlands Mall Controlling Class Representative”** will be the Woodlands Mall Controlling Class certificateholder or other representative selected by holders of at least a majority of the controlling class of the Woodlands Mall Loan-Specific Certificates by certificate balance. The **“Woodlands Mall Controlling Class”** is, as of any time of determination, the most subordinate class of the Woodlands Mall Control Eligible Certificates that has an outstanding certificate balance, as notionally reduced by any portion of the Cumulative Appraisal Reduction Amount then allocable to such class, at least equal to 25% of the initial certificate balance of that class of certificates; provided, however, that if no such class meets the preceding requirement, then the most senior class of Woodlands Mall Control Eligible Certificates will be the “Woodlands Mall Controlling Class”; provided, further, however, that if, at any time, the outstanding certificate balance of the Class WM-A certificates has been reduced to zero (without regard to the allocation of any cumulative appraisal reduction amounts), then the “Woodlands Mall Controlling Class” will be the most subordinate class of the Woodlands Mall control eligible certificates with an outstanding certificate balance greater than zero (without regard to the allocation of any cumulative appraisal reduction amounts). The

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STRUCTURAL OVERVIEW (continued)

“**Woodlands Mall Control Eligible Certificates**” consist of the Class WM-A, Class WM-B and Class WM-C certificates.

On the Closing Date, it is expected that WM-C will be the initial Woodlands Mall Controlling Class Representative.

Pacific Life Insurance Company or its affiliate is expected, on the closing date, (i) to purchase a majority of each of the Class WM-A, Class WM-B and Class WM-C certificates and (ii) to appoint itself or an affiliate as the initial Woodlands Mall Controlling Class Representative.

The “**Centre Controlling Class Representative**” will be the Centre Controlling Class certificateholder or other representative selected by holders of at least a majority of the controlling class of the Centre Loan-Specific Certificates by certificate balance. The “**Centre Controlling Class**” is, as of any time of determination, the most subordinate class of the Centre Control Eligible Certificates that has an outstanding certificate balance, as notionally reduced by any portion of the Cumulative Appraisal Reduction Amount then allocable to such class, at least equal to 25% of the initial certificate balance of that class of certificates; provided, however, that if no such class meets the preceding requirement, then the Class TC-E certificates will be the “Centre Controlling Class”. The “**Centre Control Eligible Certificates**” consist of the Class TC-E and Class TCRR certificates.

On the Closing Date, it is expected that CRE Fund Investments III LLC, which entity’s equity owner is advised by Shelter Growth Capital Partners LLC, will be the initial Centre Controlling Class Representative.

Control Termination Event

A “**Control Termination Event**” will: (1) with respect to any mortgage loan (other than the Woodlands Mall loan combination and The Centre loan combination) either (a) occur when none of the classes of the Control Eligible Certificates has an outstanding certificate balance (as notionally reduced by any Cumulative Appraisal Reduction Amount then allocable to such class) that is at least equal to 25% of the initial certificate balance of that class of certificates or (b) be deemed to occur as described in the Preliminary Prospectus; provided, however, that a Control Termination Event will in no event exist at any time that the certificate balance of each class of the Non-Vertically Retained Pooled Principal Balance Certificates senior to the Control Eligible Certificates (without regard to the allocation of Cumulative Appraisal Reduction Amounts) has been reduced to zero; and (2) with respect to each of the Woodlands Mall loan combination and The Centre loan combination, be determined in accordance with clause (1) of this definition, but only if a Control Appraisal Period exists with respect to such loan combination. With respect to excluded mortgage loans as to which the Controlling Class Representative would otherwise be the Directing Holder, a Control Termination Event will be deemed to exist.

The holders of Certificates representing the majority of the certificate balance of the most senior class of Control Eligible Certificates whose certificate balance is notionally reduced to less than 25% of the initial certificate balance of that class as a result of an allocation of an Appraisal Reduction Amount or a Collateral Deficiency Amount, as applicable, to such class will have the right to challenge the Special Servicer’s Appraisal Reduction Amount determination or a Collateral Deficiency Amount determination, as applicable, and, at their sole expense, obtain a second appraisal for any serviced loan for which an Appraisal Reduction Event has occurred or as to which there exists a Collateral Deficiency Amount, under the circumstances described in the Preliminary Prospectus.

The holders of Certificates representing the majority of the certificate balance of the most senior class of Woodlands Mall Control Eligible Certificates or Centre Control Eligible Certificates, as applicable, whose certificate balance is notionally reduced to less than 25% of the initial certificate balance of that class as a result of an allocation of an Appraisal Reduction Amount or a Collateral Deficiency Amount, as applicable, for the related Trust Subordinate Companion Loan to such class will have the right to challenge the Special Servicer's Appraisal Reduction Amount determination or a Collateral Deficiency Amount determination, as applicable, and, at their sole expense, obtain a second appraisal for the applicable loan combination, under the circumstances described in the Preliminary Prospectus.

Consultation Termination

Event

A "**Consultation Termination Event**" will occur: (1) with respect to any mortgage loan (other than the Woodlands Mall loan combination and The Centre loan combination), when none of the classes of the Control Eligible Certificates has an outstanding certificate balance, without regard to the allocation of any Cumulative Appraisal Reduction Amount, that is equal to or greater than 25% of the initial certificate balance of that class of certificates; provided, however, that a Consultation Termination Event will in no event exist at any time that the certificate balance of each class of the Non-Vertically Retained Pooled Principal Balance Certificates senior to the Control Eligible Certificates (without regard to the allocation of Cumulative Appraisal Reduction Amounts) has been reduced to zero; and (2) with respect to each of the Woodlands Mall loan combination and The Centre loan combination, be determined in accordance with clause (1) of this definition, but only if a Control Appraisal Period exists with respect to such loan combination. With respect to excluded mortgage loans as to which the Controlling Class Representative would otherwise be a Consulting Party, a Consultation Termination Event will be deemed to exist.

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STRUCTURAL OVERVIEW (continued)

Control/Consultation Rights

Any applicable Directing Holder will be entitled to have consent and/or consultation rights under the Benchmark 2019-B12 pooling and servicing agreement with respect to certain major decisions (including with respect to assumptions, waivers, certain loan modifications and workouts) and other matters with respect to each serviced loan.

After the occurrence and during the continuance of a Control Termination Event, the consent rights of the Controlling Class Representative will terminate, and the Controlling Class Representative will retain non-binding consultation rights under the Benchmark 2019-B12 pooling and servicing agreement with respect to certain major decisions and other matters with respect to the serviced mortgage loans, other than (i) any excluded mortgage loan and (ii) any servicing shift mortgage loan.

After the occurrence and during the continuance of a Consultation Termination Event, all of these rights of the Controlling Class Representative with respect to the serviced mortgage loans will terminate.

After the occurrence and during the continuance of a control appraisal period related to the Woodlands Mall loan combination or The Centre loan combination, the control and consent rights of the Woodlands Mall Controlling Class Representative or the Centre Controlling Class Representative, as applicable, with respect to the subject loan combination will terminate.

With respect to any servicing shift loan combination (for so long as it is serviced under the Benchmark 2019-B12 pooling and servicing agreement), the holder of the related Controlling Note identified above under the table entitled “*Loan Combination Controlling Notes and Non-Controlling Notes*” under “*Collateral Overview*” above (which holder will not be the Controlling Class Representative) will instead be entitled to exercise the above-described consent and consultation rights, to the extent provided under the related co-lender agreement.

With respect to each outside serviced loan combination, the applicable outside controlling class representative or other related controlling noteholder pursuant to, and subject to the limitations set forth in, the related outside servicing agreement and the related co-lender agreement will have consent, consultation, approval and direction rights with respect to certain major decisions (including with respect to assumptions, waivers, loan modifications and workouts) regarding such outside serviced loan combination, as provided for in the related co-lender agreement and in the related outside servicing agreement, and as described under “*Description of the Mortgage Pool—The Loan Combinations*” in the Preliminary Prospectus. To the extent permitted under the related co-lender agreement, the Controlling Class Representative (so long as a Consultation Termination Event does not exist) may have certain consultation rights with respect to each outside serviced loan combination.

Risk Retention Consultation Parties

The “**risk retention consultation parties**”, with respect to any serviced mortgage loan or, if applicable, serviced loan combination will be: (i) the party selected by Citi Real Estate Funding Inc., (ii) the party selected by Deutsche Bank AG, New York Branch, and (iii) the party selected by JPMorgan Chase Bank, National Association. Each risk retention consultation party will have certain non-binding consultation rights in certain circumstances, (i) for so long as no Consultation Termination Event is continuing, with respect to any specially serviced loan (other than any outside serviced mortgage loan), and (ii) during the continuance of a Consultation Termination Event, with respect to any mortgage loan (other than any outside serviced mortgage loan), as further described in the Preliminary Prospectus. Notwithstanding the foregoing, none of the risk retention consultation parties will have any consultation rights with respect to any mortgage

loan that is an excluded RRCP mortgage loan with respect to such party. Citi Real Estate Funding Inc., Deutsche Bank AG, New York Branch, and JPMorgan Chase Bank, National Association are expected to be appointed as the initial risk retention consultation parties.

With respect to any risk retention consultation party, an “**excluded RRCP mortgage loan**” is a mortgage loan or loan combination with respect to which such risk retention consultation party, or the person(s) entitled to appoint such risk retention consultation party, is a Borrower Party.

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STRUCTURAL OVERVIEW (continued)

Termination of Special Servicer

At any time, the special servicer (but not any outside special servicer for any outside serviced loan combination) may be removed and replaced by the applicable Directing Holder, if any, with or without cause upon satisfaction of certain conditions specified in the Benchmark 2019-B12 pooling and servicing agreement.

After the occurrence and during the continuance of a Control Termination Event, the holders of at least 25% of the pooled voting rights of the Pooled Certificates (other than the Class S certificates) (without regard to the application of any Appraisal Reduction Amounts) may request a vote to replace the special servicer (with respect to all of the serviced loans other than any serviced outside controlled loan combination, the Woodlands Mall loan combination and The Centre loan combination). The subsequent vote may result in the termination and replacement of the special servicer if, within 180 days of the initial request for that vote, the holders of (a) at least 66-2/3% of the pooled voting rights allocable to the Pooled Certificates of those holders that voted on the matter (provided that holders representing the applicable Certificateholder Quorum voted on the matter), or (b) more than 50% of the voting rights of each class of Pooled Certificates that are Non-Reduced Certificates vote affirmatively to so replace.

With respect to each of (i) the Woodlands Mall loan combination after the occurrence and during the continuance of both a Woodlands Mall Control Appraisal Period and an applicable Control Termination Event and (ii) The Centre loan combination after the occurrence and during the continuance of both a Centre Control Appraisal Period and an applicable Control Termination Event, the holders of at least 25% of the voting rights allocable to the Pooled Certificates (other than the Class S certificates) and the related Loan-Specific Certificates (without regard to the application of any Appraisal Reduction Amounts) may request a vote to replace the special servicer (with respect to the related loan combination). The subsequent vote may result in the termination and replacement of the special servicer if, within 180 days of the initial request for that vote, the holders of (a) at least 66-2/3% of the voting rights allocable to the Pooled Certificates and the related Loan-Specific Certificates of those holders that voted on the matter (provided that holders representing the applicable Certificateholder Quorum voted on the matter), or (b) more than 50% of the voting rights of each class of Pooled Certificates and related Loan-Specific Certificates that are Non-Reduced Certificates vote affirmatively to so replace.

“Non-Reduced Certificates” means each class of Principal Balance Certificates that has an outstanding certificate balance as may be notionally reduced by any Appraisal Reduction Amounts allocated to that class, equal to or greater than 25% of an amount equal to the initial certificate balance of that class of certificates minus all principal payments made on such class of certificates.

Notwithstanding the foregoing, but subject to the discussion in the next paragraph, solely with respect to a servicing shift loan combination, for so long as it is serviced pursuant to the Benchmark 2019-B12 pooling and servicing agreement, only the holder of the related controlling pari passu companion loan may terminate the special servicer without cause (solely with respect to the related loan combination) and appoint a replacement special servicer for that loan combination.

At any time, with respect to the serviced loans (other than with respect to the Woodlands Mall loan combination and The Centre loan combination), if the operating advisor determines, in its sole discretion exercised in good faith, that (1) the special servicer has failed to comply with the servicing standard and (2) a replacement of the special servicer would be in the best interest of the pooled certificateholders (as a collective whole), the operating advisor will have the right to recommend the

replacement of the special servicer with respect to the serviced loans (other than the Woodlands Mall loan combination and The Centre loan combination), resulting in a solicitation of a pooled certificateholder vote. The subsequent vote may result in the termination and replacement of the special servicer if, within 180 days of the initial request for that vote, the holders of at least a majority of the aggregate outstanding principal balance of the Pooled Certificates of those holders that voted on the matter (provided that holders representing the applicable Certificateholder Quorum vote on the matter) vote affirmatively to so replace.

At any time, with respect to each of the Woodlands Mall loan combination and The Centre loan combination, if the operating advisor determines, in its sole discretion exercised in good faith, that (1) the special servicer has failed to comply with the servicing standard and (2) a replacement of the special servicer would be in the best interest of the related loan-specific certificateholders (as a collective whole), the operating advisor will have the right to recommend the replacement of the special servicer with respect to the related loan combination, resulting in a solicitation of a related loan-specific certificateholder vote. The subsequent vote may result in the termination and replacement of the special servicer with respect to the related loan combination if, within 180 days of the initial request for that vote, the holders of at least a majority of the aggregate outstanding principal balance of the Loan-Specific Certificates of those holders that voted on the matter (provided that holders representing the applicable Certificateholder Quorum vote on the matter) vote affirmatively to so replace.

At any time, with respect to each of the Woodlands Mall loan combination and The Centre loan combination, if the operating advisor determines, in its sole discretion exercised in good faith, that (1) the special servicer has failed to comply with the servicing standard and (2) a replacement of the special servicer would be in the best interest of the related pooled certificateholders (as a collective whole), the operating advisor will have the right to recommend the replacement of the special servicer with respect to the related loan combination, resulting in a solicitation of a related pooled certificateholder vote. The subsequent vote may result in the termination and replacement of the special servicer with respect to the related loan combination if, within 180 days of the initial request for that vote, the holders of at least a majority of the aggregate outstanding principal balance of the Pooled Certificates of those holders that voted on the matter (provided that holders representing the applicable Certificateholder Quorum vote on the matter) vote affirmatively to so replace.

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STRUCTURAL OVERVIEW (continued)

“**Certificateholder Quorum**” means a quorum that:

(1) with respect to the Pooled Certificates and the related Loan-Specific Certificates, for purposes of a vote to terminate and replace the special servicer for either the Woodlands Mall loan combination or The Centre loan combination at the request of the holders of certificates evidencing not less than 25% of the voting rights allocable to the Pooled Certificates (other than the Class S certificates) and the related Loan-Specific Certificates (without regard to the application of any Appraisal Reduction Amounts), consists of the holders of certificates evidencing at least 50% of the voting rights (taking into account the allocation of any Appraisal Reduction Amounts to notionally reduce the certificate balances of the respective classes of applicable Principal Balance Certificates) of all of the Pooled Certificates (other than the Class S certificates) and the related Loan-Specific Certificates, on an aggregate basis;

(2) with respect to Pooled Certificates, (a) for purposes of a vote to terminate and replace the special servicer (other than with respect to the Woodlands Mall loan combination and The Centre loan combination) or the asset representations reviewer at the request of the holders of Pooled Certificates evidencing not less than 25% of the pooled voting rights (without regard to the application of any Appraisal Reduction Amounts), consists of the holders of Pooled Certificates evidencing at least 50% of the pooled voting rights (taking into account the allocation of any Appraisal Reduction Amounts to notionally reduce the certificate balances of the respective classes of Pooled Principal Balance Certificates) of all of the Pooled Certificates (other than the Class S certificates), on an aggregate basis, and (b) for purposes of each of (i) a vote to terminate and replace the special servicer (other than with respect to the Woodlands Mall loan combination and The Centre loan combination) based on a recommendation of the operating advisor, (ii) a vote to terminate and replace the special servicer with respect to the Woodlands Mall loan combination based on a recommendation of the operating advisor, and (iii) a vote to terminate and replace the special servicer with respect to The Centre loan combination based on a recommendation of the operating advisor, consists of the holders of Pooled Certificates evidencing at least 20% of the aggregate of the outstanding principal balances of all Pooled Certificates, with such quorum including at least three (3) holders of Pooled Certificates that are not risk retention affiliated with each other;

(3) with respect to the Woodlands Mall Loan-Specific Certificates, for purposes of a vote to terminate and replace the special servicer based on a recommendation of the operating advisor, consists of the holders of Woodlands Mall Loan-Specific Certificates evidencing at least 20% of the aggregate of the outstanding principal balances of all Woodlands Mall Loan-Specific Certificates, with such quorum including at least three (3) holders of Woodlands Mall Loan-Specific Certificates that are not risk retention affiliated with each other; and

(4) with respect to the Centre Loan-Specific Certificates, for purposes of a vote to terminate and replace the special servicer based on a recommendation of the operating advisor, consists of the holders of Centre Loan-Specific Certificates evidencing at least 20% of the aggregate of the outstanding principal balances of all Centre Loan-Specific Certificates, with such quorum including at least three (3) holders of Centre Loan-Specific Certificates that are not risk retention affiliated with each other.

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STRUCTURAL OVERVIEW (continued)

Termination of Special Servicer (continued)

The related outside special servicer under each outside servicing agreement generally may be (or, if the applicable outside servicing agreement has not yet been executed, it is anticipated that such outside special servicer may be) replaced by the related outside controlling class representative (or an equivalent party), or the vote of the requisite holders of certificates issued, under the applicable outside servicing agreement (depending on whether or not the equivalent of a control termination event or a consultation termination event exists under that outside servicing agreement) or by any applicable other controlling noteholder under the related co-lender agreement in a manner generally similar to the manner in which the special servicer may be replaced under the Benchmark 2019-B12 pooling and servicing agreement as described above in this “*Termination of Special Servicer*” section (although there will be differences, in particular as regards certificateholder votes and the timing of when an outside special servicer may be terminated based on the recommendation of an operating advisor).

If the special servicer, to its knowledge, becomes a Borrower Party with respect to a mortgage loan, the special servicer will not be permitted to act as special servicer with respect to that mortgage loan. Subject to certain limitations described in the Preliminary Prospectus, any applicable Directing Holder will be entitled to appoint a replacement special servicer for that mortgage loan. If there is no applicable Directing Holder or if the applicable Directing Holder does not take action to appoint a replacement special servicer within the requisite time period, a replacement special servicer will be appointed in the manner specified in the Benchmark 2019-B12 pooling and servicing agreement.

Voting Rights

At all times during the term of the Benchmark 2019-B12 pooling and servicing agreement, the voting rights for the certificates will be allocated among the respective classes of certificateholders in the following percentages:

- (1) 1% in the aggregate in the case of the respective classes of the Class X Certificates, allocated *pro rata* based upon their respective notional amounts as of the date of determination (for so long as the notional amount of at least one class of the Class X Certificates is greater than zero), and

- (2) in the case of any class of Principal Balance Certificates, a percentage equal to the product of 99% (or, if the notional amounts of all classes of the Class X Certificates have been reduced to zero, 100%) and a fraction, the numerator of which is equal to the certificate balance of such class of Principal Balance Certificates as of the date of determination, and the denominator of which is equal to the aggregate of the certificate balances of all classes of the Principal Balance Certificates, in each case, as of the date of determination,

provided, that in certain circumstances described under “*The Pooling and Servicing Agreement*” in the Preliminary Prospectus, voting rights will only be exercisable by holders of the Non-Reduced Certificates and/or may otherwise be exercisable or allocated in a manner that takes into account the allocation of Appraisal Reduction Amounts.

At all times during the term of the Benchmark 2019-B12 pooling and servicing agreement, the voting rights for the Pooled Certificates (the “**pooled voting rights**”) will be allocated among the respective classes of pooled certificateholders in the following percentages:

- 1% in the aggregate in the case of the respective classes of the Pooled Class X Certificates, allocated *pro rata* based upon their respective notional amounts as of the date of determination (for so long as the notional amount of at least one class of the Pooled Class X Certificates is greater than zero), and
- (1)

- in the case of any class of Pooled Principal Balance Certificates, a percentage equal to the product of 99% (or, if the notional amounts of all classes of the Pooled Class X Certificates have been reduced to zero, 100%) and a fraction, the numerator of which is equal to the certificate balance of such class of Pooled Principal Balance Certificates as of the date of determination, and the denominator of which is equal to the aggregate of the certificate balances of all classes of the Pooled Principal Balance Certificates, in each case, as of the date of determination,
- (2)

provided, that in certain circumstances described under “*The Pooling and Servicing Agreement*” in the Preliminary Prospectus, pooled voting rights will only be exercisable by holders of Pooled Certificates that are Non-Reduced Certificates and/or may otherwise be exercisable or allocated in a manner that takes into account the allocation of Appraisal Reduction Amounts.

The voting rights or, if applicable, pooled voting rights of any class of certificates are required to be allocated among certificateholders of such class in proportion to their respective percentage interests.

The Class S and Class R certificates will not be entitled to any voting rights.

Modification Fees: Certain fees resulting from modifications, amendments, waivers or other changes to the terms of the loan documents, as more fully described in the Preliminary Prospectus, will be used to offset expenses on the related serviced mortgage loan (i.e. reimburse the trust for certain expenses including unreimbursed advances and interest on unreimbursed advances previously incurred (other than special servicing fees, workout fees and liquidation fees) on the related serviced mortgage loan but not yet reimbursed to the trust or servicers or to pay

Compensation Servicing

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STRUCTURAL OVERVIEW (continued)

expenses (other than special servicing fees, workout fees and liquidation fees) that are still outstanding in each case unless as part of the written modification the related borrower is required to pay these amounts on a going forward basis or in the future). Any excess modification fees not so applied to offset expenses will be available as compensation to the master servicer and/or special servicer. Within any prior 12 month period, all such excess modification fees earned by the master servicer or by the special servicer (after taking into account the offset described below applied during such 12-month period) with respect to any serviced mortgage loan will be subject to a cap equal to the greater of (i) 1% of the outstanding principal balance of such mortgage loan after giving effect to such transaction and (ii) \$25,000.

All excess modification fees earned by the special servicer will be required to offset any future workout fees or liquidation fees payable with respect to the related serviced mortgage loan or related REO property; provided, that if the serviced mortgage loan ceases being a corrected loan, and is subject to a subsequent modification, any excess modification fees earned by the special servicer prior to such serviced mortgage loan ceasing to be a corrected loan will no longer be offset against future liquidation fees and workout fees unless such serviced mortgage loan ceased to be a corrected loan within 18 months of it becoming a modified mortgage loan.

Penalty Fees: All late fees and default interest will first be used to reimburse certain expenses previously incurred with respect to the related mortgage loan (other than special servicing fees, workout fees and liquidation fees) but not yet reimbursed to the trust, the master servicer or the special servicer or to pay certain expenses (other than special servicing fees, workout fees and liquidation fees) that are still outstanding on the related mortgage loan, and any excess received with respect to a serviced loan will be paid to the master servicer (for penalty fees accrued while a non-specially serviced loan) and the special servicer (for penalty fees accrued while a specially serviced loan). To the extent any amounts reimbursed out of penalty charges are subsequently recovered on a related serviced loan, they will be paid to the master servicer or special servicer who would have been entitled to the related penalty charges that were previously used to reimburse such expense.

Liquidation / Workout Fees: Liquidation fees will be calculated at the lesser of (a) 1.0% or (b) with respect to any serviced mortgage loan (or related serviced loan combination, if applicable) or related REO Property, such lesser rate as would result in a liquidation fee of \$1,000,000, for each serviced loan that is a specially serviced loan and any REO property, subject in any case to a minimum liquidation fee of \$25,000. For any serviced loan that is a corrected loan, workout fees will be calculated at the lesser of (a) 1.0% and (b) such lower rate as would result in a workout fee of \$1,000,000 when applied to each expected payment of principal and interest (other than default interest and excess interest) on the related serviced loan (or related serviced loan combination, if applicable) from the date such serviced loan becomes a corrected loan through and including the then related maturity date, subject in any case to a minimum workout fee of \$25,000.

Notwithstanding the foregoing, in connection with a maturity default, no liquidation or workout fee will be payable in connection with a payoff or refinancing of the related serviced loan within 90 days of the maturity default, but the special servicer may collect and retain appropriate fees from the related borrower in connection with the subject liquidation or workout.

In the case of an outside serviced loan combination, calculation of the foregoing amounts payable to the related outside servicer or outside special servicer may be

different than as described above. For example, the extent to which modification fees and penalty fees are applied to offset expenses may be different and liquidation fees and workout fees may be subject to different caps or no caps.

Operating Advisor

The operating advisor will, in general and under certain circumstances described in the Preliminary Prospectus, have the following rights and responsibilities with respect to the serviced mortgage loans:

- reviewing the actions of the special servicer with respect to specially serviced loans and with respect to certain major decisions regarding non-specially serviced loans as to which the operating advisor has consultation rights;
- reviewing reports provided by the special servicer to the extent set forth in the Benchmark 2019-B12 pooling and servicing agreement;
- reviewing for accuracy certain calculations made by the special servicer;
- issuing an annual report generally setting forth, among other things, its assessment of whether the special servicer is performing its duties in compliance with the servicing standard and the Benchmark 2019-B12 pooling and servicing agreement and identifying any material deviations therefrom;
- recommending the replacement of the special servicer if the operating advisor determines, in its sole discretion exercised in good faith, that (1) the special servicer has failed to comply with the servicing standard and (2) a replacement of the special servicer would be in the best interest of the certificateholders (as a collective whole); and
- after the occurrence and during the continuance of an Operating Advisor Consultation Trigger Event, consulting on a non-binding basis with the special servicer with respect to certain major decisions (and such other matters as are set forth in the Benchmark 2019-B12 pooling and servicing agreement) in respect of the applicable serviced mortgage loan(s) and/or related companion loan(s).

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STRUCTURAL OVERVIEW (continued)

An “**Operating Advisor Consultation Trigger Event**” will occur (i) with respect to any serviced loan (including the Woodlands Mall loan combination and The Centre loan combination), when the aggregate outstanding certificate balance of the HRR Certificates (as notionally reduced by any portion of the Cumulative Appraisal Reduction Amount then allocable to the HRR Certificates) is 25% or less of the initial aggregate certificate balance of the HRR Certificates, and (ii) with respect to The Centre loan combination, also when the aggregate outstanding certificate balance of the Class TCRR certificates (as notionally reduced by any portion of the Cumulative Appraisal Reduction Amount then allocable to the Class TCRR certificates) is 25% or less of the initial aggregate certificate balance of the Class TCRR certificates. With respect to excluded mortgage loans, an Operating Advisor Consultation Trigger Event will be deemed to exist.

Notwithstanding the foregoing, the operating advisor will generally have no obligations or consultation rights as operating advisor under the Benchmark 2019-B12 pooling and servicing agreement with respect to any outside serviced mortgage loan or any related REO property.

The operating advisor will be subject to termination and replacement if the holders of at least 15% of the voting rights of Non-Reduced Certificates vote to terminate and replace the operating advisor and such termination and replacement is affirmatively voted for by the holders of more than 50% of the voting rights allocable to the Non-Reduced Certificates of those holders that exercise their right to vote (provided that holders entitled to exercise at least 50% of the voting rights allocable to the Non-Reduced Certificates exercise their right to vote within 180 days of the initial request for a vote). The holders initiating such vote will be responsible for the fees and expenses in connection with the vote and replacement.

See “*The Pooling and Servicing Agreement—Operating Advisor*” in the Preliminary Prospectus.

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STRUCTURAL OVERVIEW (continued)

Asset Representations Reviewer

The asset representations reviewer will be required to review certain delinquent mortgage loans after a specified delinquency threshold has been exceeded and the required percentage of pooled certificateholders vote to direct a review of such delinquent mortgage loans. An asset review will occur when either (1) mortgage loans with an aggregate outstanding principal balance of 25% or more of the aggregate outstanding principal balance of all of the mortgage loans (including any REO mortgage loans) held by the issuing entity as of the end of the applicable collection period are at least 60 days delinquent in respect of their related monthly payments or balloon payment, if any (for purposes of this paragraph, “**delinquent loans**”) or (2) at least 15 mortgage loans are delinquent loans as of the end of the applicable collection period and the aggregate outstanding principal balance of such delinquent loans constitutes at least 20% of the aggregate outstanding principal balance of all of the mortgage loans (including any REO mortgage loans) held by the issuing entity as of the end of the applicable collection period.

The asset representations reviewer may be terminated and replaced without cause. Upon (i) the written direction of pooled certificateholders evidencing not less than 25% of the pooled voting rights requesting a vote to terminate and replace the asset representations reviewer with a proposed successor asset representations reviewer that is an eligible asset representations reviewer, and (ii) payment by such holders to the certificate administrator of the reasonable fees and expenses to be incurred by the certificate administrator in connection with administering such vote, the certificate administrator will promptly provide notice of such request to all pooled certificateholders and the asset representations reviewer by posting such notice on its internet website, and by mailing such notice to all pooled certificateholders and the asset representations reviewer. Upon the affirmative vote of pooled certificateholders evidencing at least 75% of the pooled voting rights allocable to those holders that exercise their right to vote (provided that holders representing the applicable Certificateholder Quorum exercise their right to vote within 180 days of the initial request for a vote), the trustee will be required to terminate all of the rights and obligations of the asset representations reviewer under the Benchmark 2019-B12 pooling and servicing agreement by written notice to the asset representations reviewer, and the proposed successor asset representations reviewer will be appointed. See “*The Pooling and Servicing Agreement—The Asset Representations Reviewer*” in the Preliminary Prospectus.

Dispute Resolution Provisions

The mortgage loan sellers will be subject to the dispute resolution provisions set forth in the Benchmark 2019-B12 pooling and servicing agreement to the extent those provisions are triggered with respect to any mortgage loan sold to the depositor by a mortgage loan seller and such mortgage loan seller will be obligated under the related mortgage loan purchase agreement to comply with all applicable provisions and to take part in any mediation or arbitration proceedings that may result.

Generally, in the event that a Repurchase Request (as defined in the Preliminary Prospectus) with respect to a mortgage loan (but not a Trust Subordinate Companion Loan) is not “Resolved” (as defined below) within 180 days after the related mortgage loan seller receives such Repurchase Request, then the enforcing servicer will be required to send a notice to the “Initial Requesting Certificateholder” (if any) indicating the enforcing servicer’s intended course of action with respect to the Repurchase Request. If (a) the enforcing servicer’s intended course of action with respect to the Repurchase Request does not involve pursuing further action to exercise rights against the applicable mortgage loan seller with respect to the Repurchase Request and the Initial Requesting Certificateholder, if any, or any other certificateholder or certificate owner of Pooled Certificates wishes to exercise its right to refer the matter to

mediation (including nonbinding arbitration) or arbitration, or (b) the enforcing servicer's intended course of action is to pursue further action to exercise rights against the related mortgage loan seller with respect to the Repurchase Request but the Initial Requesting Certificateholder, if any, or any other certificateholder or certificate owner of Pooled Certificates does not agree with the dispute resolution method selected by the enforcing servicer, then the Initial Requesting Certificateholder, if any, or such other certificateholder or certificate owner may deliver a written notice to the enforcing servicer indicating its intent to exercise its right to refer the matter to either mediation or arbitration. In addition, any other certificateholder or certificate owner of Pooled Certificates may deliver, within the time frame provided in the Benchmark 2019-B12 pooling and servicing agreement, a written notice requesting the right to participate in any dispute resolution consultation that is conducted by the enforcing servicer following the enforcing servicer's receipt of the notice described in the preceding sentence.

“Resolved” means, with respect to a Repurchase Request, (i) that any material breach of representations and warranties or a material document defect has been cured, (ii) the related mortgage loan or Trust Subordinate Companion Loan has been repurchased in accordance with the related mortgage loan purchase agreement, (iii) a mortgage loan has been substituted for the related mortgage loan in accordance with the related mortgage loan purchase agreement, (iv) the applicable mortgage loan seller has made a “loss of value payment”, (v) a contractually binding agreement has been entered into between the enforcing servicer, on behalf of the issuing entity, and the related mortgage loan seller that settles the related mortgage loan seller's obligations under the related mortgage loan purchase agreement, or (vi) the related mortgage loan or Trust Subordinate Companion Loan is no longer property of the issuing entity as a result of a sale or other disposition in accordance with the Benchmark 2019-B12 pooling and servicing agreement. See *“The Pooling and Servicing Agreement—Dispute Resolution Provisions”* in the Preliminary Prospectus.

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STRUCTURAL OVERVIEW (continued)

Liquidated Loan Waterfall

On liquidation of any mortgage loan, all net liquidation proceeds related to the mortgage loan (but not any related companion loan) will be applied (after allocation to offset certain advances) so that amounts allocated as a recovery of accrued and unpaid interest will not, in the first instance, include any delinquent interest that was not advanced as a result of Appraisal Reduction Amounts or interest that accrued on any junior note(s) if such mortgage loan is an AB Modified Loan. After the adjusted interest amount is so allocated, any remaining liquidation proceeds will be allocated to pay principal on the mortgage loan until the unpaid principal amount of the mortgage loan has been reduced to zero. Any remaining liquidation proceeds will then be allocated to pay delinquent interest that was not advanced as a result of Appraisal Reduction Amounts and any interest that accrued on any junior note(s) if such mortgage loan is an AB Modified Loan.

Credit Risk Retention

The securitization transaction constituted by the issuance of the Pooled Certificates will be subject to the credit risk retention rules of Section 15G of the Securities Exchange Act of 1934, as amended. An economic interest in the credit risk of the mortgage loans in such transaction is expected to be retained pursuant to Regulation RR (12 CFR Part 43) promulgated under Section 15G (“**Regulation RR**”), as a combination of (A) an “eligible vertical interest” in the form of the VRR Interest, and (B) an “eligible horizontal residual interest” in the form of the HRR Certificates. Citi Real Estate Funding Inc. will act as retaining sponsor under Regulation RR for such transaction and is expected, on the Closing Date, to partially satisfy its risk retention obligation through (i) the acquisition by each of Deutsche Bank AG, New York Branch, and JPMorgan Chase Bank, National Association (or, in each case, a “majority-owned affiliate” (as defined in Regulation RR) thereof) of a *pro rata* portion (based on the applicable percentages of the mortgage loans originated by Deutsche Bank AG, New York Branch, and JPMorgan Chase Bank, National Association, respectively) of the VRR Interest, and (ii) the purchase by a third party purchaser of the HRR Certificates. For a further discussion of the manner in which the credit risk retention requirements are expected to be satisfied by Citi Real Estate Funding Inc., as retaining sponsor for the securitization transaction constituted by the issuance of the Pooled Certificates, see “*Credit Risk Retention*” in the Preliminary Prospectus.

The VRR Interest

Prepayment Premiums and Yield Maintenance Charges. On each Distribution Date, the Vertically Retained Percentage of each yield maintenance charge and prepayment premium collected on the mortgage loans during the related collection period (or, in the case of an outside serviced mortgage loan, that accompanied a principal prepayment included in the aggregate pooled available funds for such Distribution Date) will be required to be distributed to holders of the VRR Interest.

Appraisal Reduction Amounts. On each Distribution Date, the Vertically Retained Percentage of any Appraisal Reduction Amounts will be allocated to the VRR Interest to notionally reduce (to not less than zero) the certificate balance thereof.

Investor Communications

The certificate administrator is required to include on any Form 10-D any request received from a certificateholder to communicate with other certificateholders related to certificateholders exercising their rights under the terms of the Benchmark 2019-B12 pooling and servicing agreement. Any certificateholder wishing to communicate with other certificateholders regarding the exercise of its rights under the terms of the Benchmark 2019-B12 pooling and servicing agreement will be able to deliver a written request signed by an authorized representative of the requesting investor to the certificate administrator.

Deal Website

The certificate administrator will maintain a deal website including, but not limited to:

—all special notices delivered.

—summaries of final asset status reports.

—all appraisals in connection with an appraisal reduction plus any subsequent appraisal updates.

—an “Investor Q&A Forum” and a voluntary investor registry.

Cleanup Call

On any Distribution Date on which the aggregate unpaid principal balance of the mortgage loans and the Trust Subordinate Companion Loans remaining in the issuing entity is less than 1% of the aggregate principal balance of the pool of mortgage loans and Trust Subordinate Companion Loans as of the Cut-off Date, certain specified persons will have the option to purchase all of the remaining mortgage loans and Trust Subordinate Companion Loans (and all property acquired through exercise of remedies in respect of any mortgage loan or Trust Subordinate Companion Loan) at the price specified in the Preliminary Prospectus. Exercise of the option will terminate the issuing entity and retire the then outstanding certificates.

If the aggregate certificate balances of the Class A-1, Class A-2, Class A-3, Class A-4, Class A-5, Class A-AB, Class A-S, Class B, Class C, Class D and Class E certificates and the notional amounts of the Class X-A, Class X-B and Class X-D certificates have been reduced to zero and if the master servicer has received from the remaining certificateholders the payment specified in the Benchmark 2019-B12 pooling and servicing agreement, the issuing entity could also be terminated in connection with an exchange of all the then-outstanding certificates (excluding the Class S and Class R certificates) for the mortgage loans remaining in the issuing entity, as further described under “*The Pooling and Servicing Agreement—Optional Termination; Optional Mortgage Loan Purchase*” in the Preliminary Prospectus.

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STRUCTURAL OVERVIEW (continued)

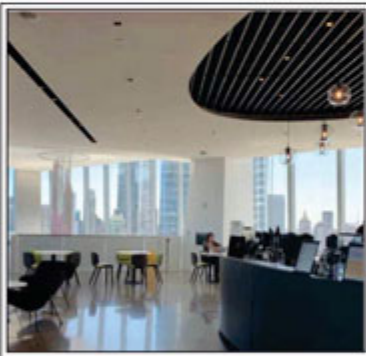
The Certificates involve certain risks and may not be suitable for all investors. For information regarding certain risks associated with an investment in the Certificates, see “Risk Factors” in the Preliminary Prospectus. Capitalized terms used but not otherwise defined in this Term Sheet have the respective meanings assigned to those terms in the Preliminary Prospectus.

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LOAN #1: 30 HUDSON YARDS

Certain images below are renderings

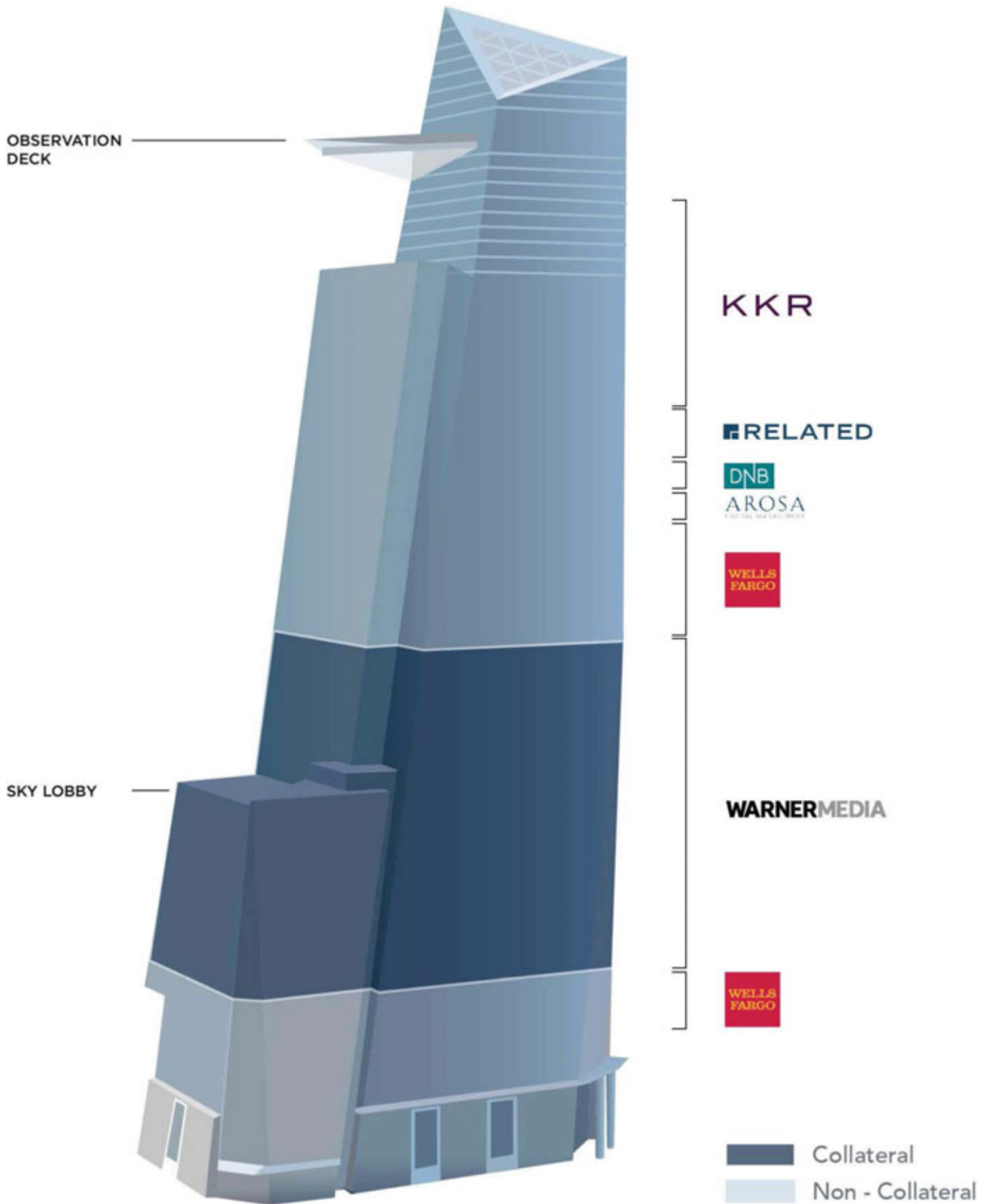


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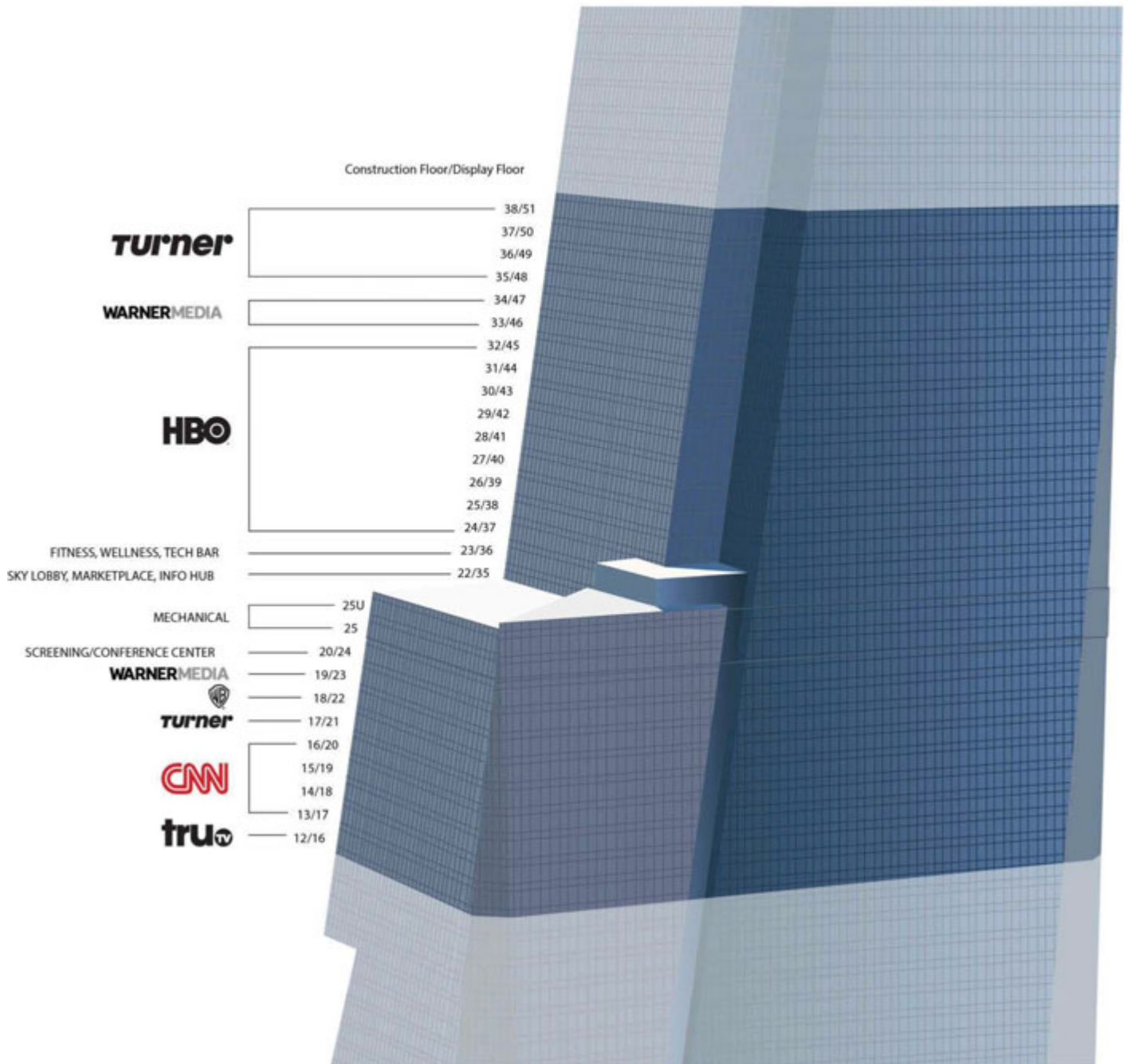
LOAN #1: 30 HUDSON YARDS

30 HUDSON YARDS



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WARNERMEDIA CONDO



The depositor has filed a registration statement (including a prospectus) with the Securities and Exchange Commission ("SEC") (SEC File No. 333-228597) for the offering to which this communication relates. Before you invest, you should read the prospectus in the registration statement and other documents the depositor has filed with the SEC for more complete information about the depositor, the issuing entity and this offering. You may get these documents for free by visiting EDGAR on the SEC website at www.sec.gov. Alternatively, the depositor or Citigroup Global Markets Inc., Deutsche Bank Securities Inc., J.P. Morgan Securities LLC, Academy Securities, Inc., Drexel Hamilton, LLC or any other underwriter or dealer participating in this offering will arrange to send you the prospectus if you request it by calling toll-free 1-800-831-9146.

LOAN #1: 30 HUDSON YARDS

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Association (“WFB”), as presented in the chart below, and are expected to be contributed to one or more future commercial mortgage securitization transactions. The 30 Hudson Yards Loan received a credit assessment of A-sf by Fitch and BBB- by Morningstar.

Loan Combination Summary				
Note	Original Balance	Cut-off Date Balance	Note Holder	Controlling Piece
A-1-S1, A-1-S2, A-1-S3, A-2-S1, A-2-S2, A-2-S3, A-1-C1, A-1-C2, A-1-C9, A-2-C1, A-3-S1, A-3-S2, A-3-S3	\$698,000,000	\$698,000,000	Hudson Yards 2019-30HY	No ⁽²⁾
A-1-C4, A-1-C5, A-1-C10	\$93,200,000	\$93,200,000	Benchmark 2019-B12	No
A-1-C3, A-1-C6, A-1-C7, A-1-C8,	\$160,000,000	\$160,000,000	DBNY ⁽¹⁾	No
A-2-C2, A-2-C3, A-2-C4, A-2-C5	\$84,400,000	\$84,400,000	GSMC ⁽¹⁾	No
A-3-C1, A-3-C2, A-3-C3, A-3-C4, A-3-C5	\$84,400,000	\$84,400,000	WFB ⁽¹⁾	No
B-1, B-2, B-3	\$310,000,000	\$310,000,000	Hudson Yards 2019-30HY	Yes ⁽²⁾
Total	\$1,430,000,000	\$1,430,000,000		

(1) Expected to be contributed to one or more future securitization transactions.

(2) The holder of the 30 Hudson Yards Junior Notes will have the right to appoint the special servicer of the 30 Hudson Yards Loan Combination and to direct certain decisions with respect to the 30 Hudson Yards Loan Combination, unless a control appraisal event exists under the related co-lender agreement; provided that after the occurrence of a control appraisal event with respect to the 30 Hudson Yards Junior Notes, the holder of the 30 Hudson Yards Note A-1-S1 will have such rights. For so long as the 30 Hudson Yards Junior Notes are included in the Benchmark 2019-B12 securitization, and a control appraisal event does not exist, such rights will be exercised by the Directing Holder of the Benchmark 2019-B12 loan-specific certificates.

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LOAN #1: 30 HUDSON YARDS

The 30 Hudson Yards Senior Notes have an interest rate of 3.11000% *per annum* and the 30 Hudson Yards Junior Notes have an interest rate of 4.21709677% *per annum*, resulting in a weighted average interest rate of 3.35000% *per annum* on the 30 Hudson Yards Loan Combination. The proceeds of the 30 Hudson Yards Loan Combination and a new cash contribution from the borrower sponsor were primarily used to fund the acquisition of the 30 Hudson Yards Property and pay origination costs.

The 30 Hudson Yards Loan Combination had an initial term of 120 months, has a remaining term of 119 months as of the Cut-off Date and requires monthly payments of interest only for the term of the 30 Hudson Yards Loan Combination. The scheduled maturity date of the 30 Hudson Yards Loan is July 6, 2029. At any time after the earlier to occur of (i) the second anniversary of the securitization closing date of the final real estate mortgage investment conduit that includes that last portion of the 30 Hudson Yards Loan Combination and (ii) June 14, 2022, the 30 Hudson Yards Loan Combination may be (i) defeased with direct, non-callable obligations of the United States of America or other obligations which are “government securities” permitted under the loan documents or (ii) prepaid with a payment of a yield maintenance premium. Voluntary prepayment of the 30 Hudson Yards Loan Combination is permitted on or after March 6, 2029 without payment of any prepayment premium.

The Mortgaged Property. The 30 Hudson Yards Property is comprised of a 1,463,234 square feet office condominium designated as the Time Warner Unit located across 26 floors within the larger 30 Hudson Yards building in New York, New York. The larger 30 Hudson Yards Building (as defined below) was constructed in 2019 and consists of approximately 2.6 million square feet across 68 floors (the “**30 Hudson Yards Building**”). The 30 Hudson Yards Building, which stands 1,296 feet tall making it the second tallest office building in New York City, is designed to achieve LEED Core & Shell Gold certification, features panoramic views, outdoor terraces, a triple-height lobby, the highest outdoor observation deck in the city, direct access to restaurants and retail at The Shops at Hudson Yards and a future underground connection to the new No. 7 subway station. Collateral for the 30 Hudson Yards Loan Combination is comprised of the WarnerMedia condominium, which consists of 1,463,234 rentable square feet across 26 floors (construction floors 12 through 38 and display floors 16 through 51) within the 30 Hudson Yards Building (the “**WarnerMedia Condo**”). Four floors are used for amenity space including a fitness center, a cafeteria, technology bar and a sky lobby.

The 30 Hudson Yards Property is subject to a condominium declaration. The 20-30 Hudson Yards Condominium is comprised of eight units: the WarnerMedia Unit (36.09% common interest), the Retail Unit (33.39% common interest), five office units (28.04% common interest collectively) and the Observation Deck Unit (2.48% common interest). In addition to the subject WarnerMedia Unit, the five office units and the Observation Deck Unit are located at the 30 Hudson Yards Building. The Retail Unit consists of the Shops at Hudson Yards, and is located adjacent to the 30 Hudson Yards Property at 20 Hudson Yards.

The borrower acquired the 30 Hudson Yards Property from TW NY Properties LLC, a wholly-owned subsidiary of Warner Media LLC (“WarnerMedia”) for \$2.155 billion (\$1,473 PSF) in a sale-leaseback transaction. WarnerMedia previously acquired the WarnerMedia Condo following the 2014 sale of its existing headquarters, Time Warner Center at Columbus Circle.

As of August 6, 2019, the 30 Hudson Yards Property was 100.0% occupied by WarnerMedia. WarnerMedia, who along with parent company AT&T Inc. (“AT&T”; rated Baa2/BBB/A- by Moody’s/S&P/Fitch), has reportedly invested approximately \$700 million (\$478 PSF) on the fit-out of its space and at loan origination, entered into a direct 15-year triple-net lease with the borrower for the entire 30 Hudson Yards Property. WarnerMedia is in the process of consolidating all of its New York-based business segments, including Turner, HBO, Warner Bros. and CNN, into 30 Hudson Yards which will serve as WarnerMedia’s global headquarters and is expected to host approximately 5,000 employees.

WarnerMedia (formerly Time Warner Inc.) is a global leader in media and entertainment with businesses in television networks, film and TV entertainment and publishing. Comprised of HBO, Turner, and Warner Bros., WarnerMedia is a leader in the industry in creating premium content, operating one of the world’s largest television and film studios, and owning a vast library of entertainment. As of December 31, 2017, WarnerMedia had approximately 26,000 employees. Prior to being acquired by AT&T, Time Warner Inc. was rated Baa2/BBB/A- by Moody’s/S&P/Fitch.

The WarnerMedia lease is a direct 15-year triple-net lease for the entire WarnerMedia Condo comprising 1,463,234 rentable square feet across 26 floors (construction floors 12 through 38 and display floors 16 through 51) within the 30 Hudson Yards Building, at an initial base rent of \$75.00 PSF with 2.5% annual rent escalations. AT&T (rated A-

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LOAN #1: 30 HUDSON YARDS

/Baa2/BBB/ by Fitch/Moody's/S&P) will serve as the guarantor on the WarnerMedia lease. The WarnerMedia lease will include four, 5-year extension options each at 100% of fair market rent. The WarnerMedia lease was signed in conjunction with loan origination in June 2019. There are no free rent periods or outstanding tenant improvements or leasing costs.

Additionally, the WarnerMedia lease is structured with a contraction option for up to 10 floors totaling 404,325 square feet (27.6% of rentable square feet) (the **"Contraction Space"**) where, on the 5th anniversary of the lease commencement date, the tenant has the right to contract one or more contiguous full floors comprising floors 42 through 51. In connection with the contraction option, WarnerMedia is required to pay a contraction fee to the borrower equal to \$24,000,000 for each floor contracted (the **"Contraction Payment"**). If the tenant elects to contract more than three floors, the borrower is required to deposit with the lender an amount equal to \$125 PSF of the contracted space in excess of the highest three floors, to be held by the lender and held as additional collateral for the 30 Hudson Yards Loan Combination (the **"Contraction Escrow"**), with the balance of the Contraction Payment (including with respect to the highest three floors), after payment of any amounts owed to the WarnerMedia tenant and all costs incurred in connection with the contraction, distributed to the borrower, or if a Trigger Period (defined below) exists, deposited with the lender as additional collateral for the 30 Hudson Yards Loan Combination. The Contraction Escrow will be released to the borrower in connection with the borrower's re-leasing of the Contraction Space (or any portion thereof, subject to a cap of \$125 PSF of re-let space, calculated in the aggregate across all re-let Contraction Space) with Qualified Leases (as defined below) that are in full force and effect in order to pay for the cost of tenant improvements, leasing commissions, leasing costs and other landlord obligations with respect to such replacement lease and (if any remaining portion of such \$125 PSF cap remains after application or allocation to the foregoing amounts) to cover the payment of base rent during any initial free rent period thereunder. Once all the subject Contraction Space has been re-let, any remaining funds in the Contraction Escrow after payment of such costs and the expiration of such initial free rent periods (determined on a per square foot basis), or retention in the Contraction Escrow of amounts sufficient to pay the same, will be disbursed to the borrower, or if a Trigger Period exists, deposited with the lender as additional collateral for the 30 Hudson Yards Loan Combination.

A **"Qualified Lease"** means a replacement lease (i) with a term that extends at least five years beyond the maturity date; (ii) entered into in accordance with the 30 Hudson Yards Loan Combination documents and (iii) on market terms with respect to, among other things, base rent, additional rent and recoveries and tenant improvement allowances.

The following table presents certain information relating to the major tenant (of which certain tenants may have co-tenancy provisions) at the 30 Hudson Yards Property:

Largest Owned Tenant Based on Underwritten Base Rent⁽¹⁾

<u>Tenant Name</u>	<u>Credit Rating</u> (Fitch/MIS/S&P) ⁽²⁾	<u>Tenant GLA</u>	<u>% of GLA</u>	<u>UW Base Rent</u>	<u>% of Total UW Base Rent</u>	<u>UW Base Rent \$ per SF</u>	<u>UW Gross Rent⁽³⁾</u>	<u>UW Gross Rent \$ per SF⁽³⁾</u>	<u>Lease Expiration</u>	<u>Renewal / Extension Options</u>
WarnerMedia	A- / Baa2 / BBB	1,463,234	100.0%	\$109,742,550	100.0%	\$75.00	\$152,010,443	\$103.89	6/30/2034	4, 5-year options
All Tenants		1,463,234	100.0%	\$109,742,550	100.0%	\$75.00	\$152,010,443	\$103.89		
Vacant		0	0.0%	0	0.0%	\$0.00	0	\$0.00		
Total / Wtd. Avg. All Owned Tenants		1,463,234	100.0%	\$109,742,550	100.0%	\$75.00	\$152,010,443	\$103.89		

(1) Based on the rent roll dated June 14, 2019.

(2) Credit Ratings are those of the parent company and guarantor on the WarnerMedia lease, AT&T.

(3) UW Gross Rent and UW Gross Rent \$ per SF represents the base rent of \$75.00 PSF plus underwritten reimbursements of \$42,267,893 (\$28.89 PSF), which are based on the 100% triple-net structure of the WarnerMedia lease.

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LOAN #1: 30 HUDSON YARDS

The following table presents certain information relating to the lease rollover schedule at the 30 Hudson Yards Property, based on initial lease expiration dates:

Lease Expiration Schedule⁽¹⁾⁽²⁾

<u>Year Ending December 31</u>	<u>Expiring Owned GLA</u>	<u>% of Owned GLA</u>	<u>Cumulative % of Owned GLA</u>	<u>UW Base Rent</u>	<u>% of Total UW Base Rent</u>	<u>UW Base Rent \$ per SF</u>	<u># of Expiring Tenants</u>
MTM	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2019	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2020	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2021	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2022	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2023	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2024	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2025	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2026	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2027	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2028	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2029	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2030 & Thereafter	1,463,234	100.0%	100.0%	\$109,742,550	100.0%	\$75.00	1
Vacant	0	0.0%	100.0%	\$0	0.0%	\$0.00	0
Total / Wtd. Avg.	1,463,234	100.0%		\$109,742,550	100.0%	\$75.00	1

(1) The tenant has contraction options that may become exercisable prior to the originally stated expiration date of the tenant lease that are not considered in this rollover schedule.

(2) Based on the underwritten rent roll dated June 14, 2019.

The following table presents certain information relating to historical leasing at the 30 Hudson Yards Property:

Historical Leased %⁽¹⁾

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>As of 8/6/2019</u>
Owned Space	NAP	NAP	NAP	NAP	100.0% ⁽²⁾

(1) Based on the underwritten rent roll dated June 14, 2019.

(2) The tenant has contraction options that may become exercisable prior to the originally stated expiration date of the tenant lease that are not considered in this rollover schedule.

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- Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the 30 Hudson Yards Property:

Cash Flow Analysis

	Underwritten	Underwritten \$ per SF
Base Rent	\$109,742,550	\$75.00
Rent Steps ⁽¹⁾	2,743,564	\$1.88
Straight Line Rent Credit ⁽²⁾	14,618,240	\$9.99
Gross Up Vacancy	0	\$0.00
Reimbursements	42,267,893	\$28.89
Other Income	0	\$0.00
Vacancy & Credit Loss ⁽³⁾	(5,081,167)	(\$3.47)
Effective Gross Income	\$164,291,079	\$112.28
Real Estate Taxes (PILOT) ⁽⁴⁾	21,270,425	\$14.54
Insurance	1,547,918	\$1.06
Condo Association Fees	5,847,159	\$4.00
Management Fee ⁽⁵⁾	1,000,000	\$0.68
Other Operating Expenses	12,602,391	\$8.61
Total Operating Expenses	\$42,267,893	\$28.89
Net Operating Income	\$122,023,186	\$83.39
TI/LC	0	\$0.00
Capital Expenditures	292,647	\$0.20
Net Cash Flow	\$121,730,539	\$83.19
Occupancy	100.0%	
NOI Debt Yield⁽⁶⁾	10.9%	
NCF DSCR⁽⁷⁾	3.45x	

- (1) Underwritten Rent Steps includes the first annual rent step to \$76.88 PSF in June 2020.
- (2) Straight Line Rent Credit given to (i) the WarnerMedia non-contraction space through the fully-extended lease term and (ii) the WarnerMedia contraction space through June 2024 (contraction option year 5).
- (3) Represents an underwritten economic vacancy of 3.0%.
- (4) Underwritten to the average of the projected PILOT payments over the 15-year lease term.
- (5) Management Fee is set to 1.5% of Effective Gross Income, capped at \$1.0 million.
- (6) Calculated based on the aggregate outstanding principal balance as of the Cut-off Date of the 30 Hudson Yards Senior Notes.
- (7) Based on the interest only debt service payments of the 30 Hudson Yards Senior Notes.

- Appraisal.** According to the appraisal, the 30 Hudson Yards Property had an “as-is” appraised value of \$2,200,000,000 as of an effective date of May 23, 2019.

Appraisal Approach	“As-Is” Value	Discount Rate	Capitalization Rate
Direct Capitalization Approach	\$2,225,000,000	N/A	4.75%
Discounted Cash Flow Approach	\$2,200,000,000	5.75%	5.25% ⁽¹⁾

- (1) Represents the terminal capitalization rate.

- Environmental Matters.** According to a Phase I environmental report, dated May 30, 2019, the environmental consultant did not identify evidence of any recognized environmental conditions.

Market Overview and Competition. The 30 Hudson Yards Property is located at 530 West 33rd Street on the southwest corner of 33rd Street and 10th Avenue in New York, New York. Per the appraisal, the Manhattan office market saw leasing velocity rise 46.0% in Q4 2018 on a year-over-year basis and up 43.9% when compared to the ten-year average. Manhattan leasing in Q4 2018 was one of the strongest on record for the 2018 year, totaling 43.2 million square feet. As of Q1 2019, average asking rents in Manhattan were \$76.12 PSF, slightly down from the 2018 average of \$76.30 PSF.

- Availability saw a slight increase from 12.2% to 12.3% from year-end 2018 to Q1 2019. Midtown average asking rents remained flat for Q1 2019, at \$82.02 PSF. The Far West Side, Plaza District, and Park Avenue submarkets represent the three highest overall asking rents in all of Manhattan, with all 3 submarkets averaging above \$100 PSF. These submarkets tend to have higher rents due to newer, boutique office product, high demand, and high leasing activity. Midtown Manhattan has a higher mix of Class A trophy buildings that range from the new construction occurring in Hudson Yards and Midtown East, to the classic, staple buildings located along Park Avenue and Plaza District.

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Hudson Yards is an approximately 28-acre area on the far West Side of Manhattan, bounded by West 30th St., West 33rd Street, 10th Avenue and 12th Avenue. Hudson Yards is the cornerstone of the greater Hudson Yards District, which recently has been rezoned to accommodate nearly 40 million square feet of new mixed-use development. Due to the rezoning, the Hudson Yards District has the capacity to include approximately 26 million square feet of new office development, approximately 20,000 housing units, approximately three million square feet of hotel space, a public school, approximately two million square feet of retail space and more than 20 acres of public open space. The neighborhood transformation will be facilitated by the recently-completed extension of the No. 7 subway line from Grand Central Station, with the final station located immediately adjacent to the Hudson Yards site.

The 30 Hudson Yards Property is located in the Far West Side submarket of Manhattan. As of Q1 2019, the submarket was home to approximately 6.9 million square feet of commercial real estate space, with a vacancy rate of 2.4% and average asking rent of \$119.03 PSF. The Far West Side submarket has transformed in recent years due to the establishment of the Hudson Yards development. This development has encompassed a variety of office buildings, residential buildings, retail stores and parks. Many office tenants have decided to relocate from Midtown to the Far West Side. As a result of the new developments, average asking rents increased approximately 18.5% throughout 2017 from \$100.38 PSF as of Q1 2017 to \$118.94 PSF as of Q4 2017. For the same time period, the average vacancy rate decreased from 20.7% as of Q1 2017 to 3.8% as of Q4 2017. Both average asking rent and the vacancy rate have slightly improved as of Q1 2019 at \$119.03 PSF and 2.4%, respectively.

In order to compare contract rent at the 30 Hudson Yards Property with market standards, the appraiser adjusted the base rent to reflect the modified gross equivalent rent. The appraiser's modified gross equivalent contract rent at the 30 Hudson Yards Property was \$106.01 PSF, which includes contract rent of \$75.00 PSF, real estate taxes of \$13.85 PSF and operating expenses of \$17.15 PSF. The appraiser determined a modified gross equivalent market rent at the 30 Hudson Yards Property of \$100.00 PSF for floors 16 through 24, \$110.00 PSF for floors 35 through 43 and \$120.00 PSF for floors 44 through 51, for an overall average of \$108.24 PSF. The WarnerMedia lease provides for an initial base rent of \$75.00 PSF for all floors.

The following chart summarizes comparable office leases per the appraisal. Due to the lack of large single tenant building leases available in the marketplace, the appraiser identified comparable single-tenant and large headquarter leases within comparable properties that would directly compete with the WarnerMedia lease. The most comparable leases to the WarnerMedia lease are Deutsche Bank's recent lease at Time Warner Center and Blackrock's lease at 50 Hudson Yards:

Large Headquarter and Net Lease Comparables⁽¹⁾

<u>Property Name</u>	<u>Tenant Name</u>	<u>Lease Year</u>	<u>Term (mos.)</u>	<u>Tenant Size (SF)</u>	<u>Contract Net Rent PSF</u>	<u>Modified Gross Rent PSF</u>	<u>Free Rent (mos.)</u>
30 Hudson Yards	WarnerMedia	2019	120	1,463,234	\$75.00	\$106.01	0
50 Hudson Yards	Blackrock	2017	264	847,081	\$91.00	\$128.50	21
1100 Avenue of the Americas	Bank of America	2018	240	357,940	NAP	\$118.00	17
424 Fifth Avenue	WeWork	2018	240	697,029	\$108.74	\$129.97	12
One Columbus Circle	Deutsche Bank	2019	264	1,063,104	\$73.01	\$119.00	15
Total / Wtd. Avg.⁽²⁾			255	2,965,154	\$88.41	\$124.17	16

(1) Source: Appraisal.

(2) Total / Wtd. Avg. excludes the 30 Hudson Yards Property

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Summary of Comparable Office Leases ⁽¹⁾

Property Name	Tenant Name	Lease Year	Term (mos.)	Lease Type	Tenant Size (SF)	Base Rent PSF	Free Rent (mos.)
55 Hudson Yards	Apple	Feb-2019	135	Modified Gross	29,881	\$104.00	12
520 Madison Avenue	Madison Realty Capital	Feb-2019	128	Modified Gross	19,000	\$118.00	8
425 Park Avenue	Citadel	Jan-2019	150	Modified Gross	161,200	\$178.27	14
1095 Avenue of the Americas	Lloyds Bank	Jan-2019	120	Modified Gross	34,846	\$150.00	0
1114 Avenue of the Americas	Vinson & Elkins, LLP	Jan-2019	192	Modified Gross	76,497	\$95.00	12
50 Hudson Yards	Confidential	Jan-2019	120	Modified Gross	400,000	\$110.00	18
1 Vanderbilt Avenue	TD Securities	Dec-2018	198	Modified Gross	118,872	\$130.00	18
55 Hudson Yards	Third Point	Nov-2018	120	Modified Gross	89,043	\$130.00	13
1114 Avenue of the Americas	The Trade Desk	Nov-2018	144	Modified Gross	95,580	\$139.00	12
441 Ninth Avenue	Peloton Interactive, LLC	Nov-2018	180	Modified Gross	312,000	\$106.66	22.5
55 Hudson Yards	Vista Equity Partners	Nov-2018	192	Modified Gross	28,429	\$104.00	13
1271 Avenue of the Americas	Bessemer Trust Company	Sep-2018	264	Modified Gross	236,631	\$107.00	0
1 Vanderbilt Avenue	The Carlyle Group	July-2018	189	Modified Gross	95,367	\$166.00	9
66 Hudson Boulevard	AllianceBernstein	May-2018	240	Modified Gross	186,226	\$105.00	16
390 Madison Avenue	JP Morgan Chase	Mar-2018	128	Modified Gross	417,157	\$94.40	20
Total / Wtd. Avg.			168		2,300,729	\$116.14	15

(1) Source: Appraisal.

The Borrower. The borrower is 30 HY WM Unit Owner LP, a single-purpose, single-asset entity with two independent directors. Legal counsel to the borrower delivered a non-consolidation opinion in connection with the origination of the 30 Hudson Yards Loan Combination. The sponsor of the borrower, 30 HY WM REIT Owner LP (the "**Borrower Sponsor**"), is a joint venture among RSA 30 HY WM LLC (the "**Related Partner**"), RFM Cactus NYSS 30HY Sub LLC (the "ASRS/ Related JV"), Allianz U.S. Private REIT LP ("**Allianz REIT**") and APKV US Private REIT LP ("**APKV REIT**"). The Related Partner holds 1.01% direct equity interest of the Borrower Sponsor, ASRS/Related JV holds 49.99% direct equity interest of the Borrower Sponsor, APKV REIT holds 4.9% direct equity interest of the Borrower Sponsor, and Allianz REIT holds 44.1% direct equity interest of the Borrower Sponsor. The 30 Hudson Yards Loan Combination is recourse to the borrower, and there is no separate recourse guarantor.

Related is a privately owned real estate firm in the United States. Founded by Stephen M. Ross in 1972, Related is a fully integrated, highly diversified company with experience in development, acquisition, management, finance, marketing and sales. Headquartered in New York City, Related has offices and major developments in Boston, Chicago, Los Angeles, San Francisco, South Florida, Washington, DC and London, and has a team of approximately 4,000 professionals.

Arizona State Retirement System is a state agency that administers a pension plan, long term disability plan, retiree health insurance plans and other benefits to qualified government workers for the state of Arizona. More than a half-million of Arizona's public servants belong to the ASRS, which encompasses state employees, the three state universities, community college districts, school districts and charter schools, all 15 counties, most cities and towns, and a variety of political subdivisions, such as fire and water districts.

Allianz is a European financial services company headquartered in Munich, Germany with core businesses in insurance and asset management. As of year-end 2018, the Allianz had approximately €1,961 billion of assets under management. In the U.S., investment advisory services are provided by AllianzGlobal Investors Capital, Allianz Global Investors Solutions and PIMCO.

■ **Escrows.** The 30 Hudson Yards Loan Combination did not require upfront reserves.

During a Trigger Period (as defined below), the borrower is required to fund the following reserves with respect to the 30 Hudson Yards Loan Combination: (i) a tax reserve in an amount equal to 1/12th of the amount that the lender estimates will be necessary to pay taxes over the then succeeding 12-month period, (ii) if an acceptable blanket policy is not in place, an insurance reserve in an amount equal to 1/12th of the amount that the lender estimates will be necessary to pay insurance premiums over the then succeeding 12-month period, (iii) a replacement reserve in an amount equal to 1/12th of \$0.20 PSF and (iv) a condominium reserve in an amount equal to 1/12th of the amount that the lender estimates will be necessary to pay common charges over the then succeeding 12-month period.

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In addition, regardless of whether a Trigger Period exists, on each payment date from and after July 6, 2024 capital expenditure reserves will be required in a monthly amount equal to 1/12th of \$0.20 PSF.

- **Lockbox and Cash Management.** The 30 Hudson Yards Loan Combination is structured with a hard lockbox and springing cash management. During the continuance of a Trigger Period (as defined below), the borrower is required to send tenant direction letters to all tenants of the 30 Hudson Yards Property instructing them to deposit all rents and other payments into the lockbox account controlled by the lender, and any funds received by the borrower or the property manager are required to be immediately deposited in the lockbox account. During a Trigger Period, all funds in the lockbox account are required to be transferred on each business day into a cash management account established for the sole and exclusive benefit of the lender, and applied to all required payments and reserves as set forth in the 30 Hudson Yards Loan Combination documents, and all property costs and expenses contained in the lender-approved budget, and thereafter, minimum distributions to holders of preferred shares issued by the REIT in a maximum amount not to exceed \$100,000 per annum and all property costs and expenses contained in the lender-approved budget, and thereafter, minimum distributions to holders of preferred shares issued by the REIT in a maximum amount not to exceed \$100,000 per annum, with any excess funds being held by the lender in a lease sweep reserve or cash collateral account, as applicable, as additional collateral for the 30 Hudson Yards Loan Combination. Under certain circumstances and for limited purposes described in the 30 Hudson Yards Loan Combination documents, the borrower may request disbursements of such excess cash flow.

A “**Trigger Period**” means a period (A) commencing upon the earliest to occur of (i) an event of default under the 30 Hudson Yards Loan Combination documents, (ii) the debt yield falling below 6.50% for any calendar quarter (“**Low Debt Yield Trigger**”), or (iii) a Lease Sweep Period (as defined below) and (B) expiring upon (x) with respect to a Trigger Period which commenced in connection with clause (i) above, the cure, if applicable, of such event of default, (y) with respect to a Trigger Period which commenced in connection with clause (ii) above, the debt yield being equal to or greater than 6.50% for two consecutive calendar quarters, and (z) with respect to a Trigger Period which commenced in connection with clause (iii) above, such Lease Sweep Period is cured as described below. In addition, the borrower shall have the right to cure a Low Debt Yield Trigger by delivering cash collateral or an acceptable letter of credit to the lender in an amount that, if applied to reduce the outstanding principal balance of the 30 Hudson Yards Loan Combination, would cause the debt yield test to be satisfied.

Notwithstanding the foregoing, so long as the WarnerMedia lease remains in full force and effect, then in the event the debt yield falls below the Low Debt Yield Trigger as a result of the WarnerMedia tenant’s exercise of its contraction right with respect to any Contraction Space, the foregoing minimum debt yield requirement and cash flow sweep upon a Low Debt Yield Trigger shall not apply until such time as the debt yield shall have increased to (or above) the Low Debt Yield Trigger (in which event, and thereafter, the minimum debt yield requirement, and cash flow sweep upon a Low Debt Yield Trigger, shall again be applicable). Any letters of credit provided as outlined above or as otherwise outlined herein shall be subject to an aggregate cap of 10% of the loan amount and other criteria to be set forth in the 30 Hudson Yards Loan Combination documents.

A “**Lease Sweep Period**” shall occur upon or during (a) a bankruptcy, insolvency or similar events of the Major Tenant (as defined herein) or lease guarantor, (b) failure to pay base rent or other material monetary or material nonmonetary defaults by a Major Tenant under its Major Lease (as defined herein) beyond all notice and cure periods thereunder, (c) the Major Tenant going dark (i.e. ceases operations at its leased premises with respect to a portion of its leased premises such that the Major Tenant is no longer operating 800,000 rentable square feet (less contraction space that has been relet)), with subleases not counting as dark space except during the last two years of the term of the 30 Hudson Yards Loan Combination, (d) notice of (or actual) termination, cancellation, surrender, contraction of a portion of its leased premises such that the Major Tenant is no longer occupying 800,000 gross square feet or non-renewal of such Major Tenant’s lease, or (e) upon a decline in the credit rating of AT&T (or of any lease guarantor of a replacement tenant that has a rating of at least “BB-” at the time of replacement) below “BB-” or the equivalent by any of the rating agencies. For the avoidance of doubt, the exercise by the WarnerMedia tenant of its contraction option for all or any portion of the Contraction Space shall not, in and of itself, constitute a Lease Sweep Period.

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A Lease Sweep Period may be cured as follows: (i) with respect to any Lease Sweep Period, at such time as the borrower has reserved with the lender into the lease sweep reserve (or has delivered a letter of credit (satisfying criteria to be set forth in the 30 Hudson Yards Loan Combination documents) reasonably acceptable to the lender) an amount equal to \$125 (or, if the only Lease Sweep Period is pursuant to clause (e) above, \$50 or, if the only Lease Sweep Period is pursuant to clause (c) above, \$87) per rentable square foot of the applicable lease sweep, (ii) in the case of a Lease Sweep Period under clause (a), (1) if the Major Tenant became subject to a bankruptcy proceeding, (A) the Major Lease has been assumed (but not assigned) by the Major Tenant without any negative material change in the economics, scope or duration of such Major Lease and a plan of reorganization has been confirmed as to the Major Tenant and the effective date of such plan of reorganization has occurred or (B) the assignment and assumption of the Major Lease by an unaffiliated third party assignee pursuant to an assignment approved in the bankruptcy proceeding by non-appealable court order and execution of a guaranty by a replacement guarantor; and (2) if the guarantor under the Major Lease became subject to a bankruptcy proceeding, (A) the Major Lease has remained in effect and no base rent default or material monetary or material non-monetary default has occurred and is continuing (other than a bankruptcy of the Major Tenant, provided in such case, clause (1) above shall also apply), and a plan of reorganization has been confirmed as to the guarantor of the Major Lease and the effective date of such plan of reorganization has occurred (and, if applicable, clause (1)(B) above has been satisfied) or (B) the assignment and assumption of the Major Lease by an unaffiliated third party assignee pursuant to an assignment approved in the bankruptcy proceeding by non-appealable court order and execution of a guaranty by a replacement guarantor, (iii) in the case of a Lease Sweep Period under clause (b), a cure by the Major Tenant of the applicable default under its Major Lease, (iv) in the case of a Lease Sweep Period under clause (c), the Major Tenant is once again operating at least 800,000 rentable square feet of its leased premises (less contraction space that has been relet), which shall include subleased space except during the last two years of the term of the 30 Hudson Yards Loan Combination or (v) in the case of a Lease Sweep Period under clauses (c) or (d), (x) the borrower's re-leasing of the affected portion of the leased premises (or 95% of such affected portion if the contraction option has not been exercised by WarnerMedia tenant) pursuant to qualified leases and (y) the completion and payment in full of all tenant improvements, leasing commissions, leasing costs and other landlord obligations of an inducement nature with respect to such leases, all free and abated rent periods shall have expired and full rent thereunder commenced (or either (A) sufficient reserves therefor have been escrowed with the lender or (B) the borrower has delivered a letter of credit to the lender (satisfying criteria to be set forth in the 30 Hudson Yards Loan Combination documents) reasonably acceptable to the lender to secure the payment of such costs and free or abated rent).

As used herein, (i) **“Major Lease”** shall mean the WarnerMedia lease, and any replacement Lease covering all or substantially all of the space currently demised under the WarnerMedia lease (which, for this purpose, if the Contraction Option is exercised, shall not include any tenant under a lease with respect to the Contraction Space, and (ii) **“Major Tenant”** shall mean a tenant under a Major Lease.

Property Management. The 30 Hudson Yards Property is self-managed by WarnerMedia or an affiliate thereof. If WarnerMedia is no longer managing the 30 Hudson Yards Property, the borrower is required to cause the 30 Hudson Yards Property to be managed by a qualified property manager, as defined in the 30 Hudson Yards Loan Combination documents).

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- **Current Mezzanine or Subordinate Indebtedness.** The 30 Hudson Yards Loan Combination consists of 29 *pari passu* senior notes with an aggregate initial principal balance of \$1,120,000,000 and three junior notes, with an aggregate initial principal balance of \$310,000,000. Based on the total combined debt of \$1,430,000,000, the Cut-off Date LTV Ratio, Maturity Date LTV Ratio, DSCR Based on Underwritten NCF and Debt Yield Based on Underwritten NOI are illustrated below:

Financial Information

	30 Hudson Yards Senior Notes	30 Hudson Yards Loan Combination
Cut-off Date Balance	\$1,120,000,000	\$1,430,000,000
Cut-off Date LTV Ratio	50.9%	65.0%
Maturity Date LTV Ratio	50.9%	65.0%
DSCR Based on Underwritten NCF	3.45x	2.51x
Debt Yield Based on Underwritten NOI	10.9%	8.5%

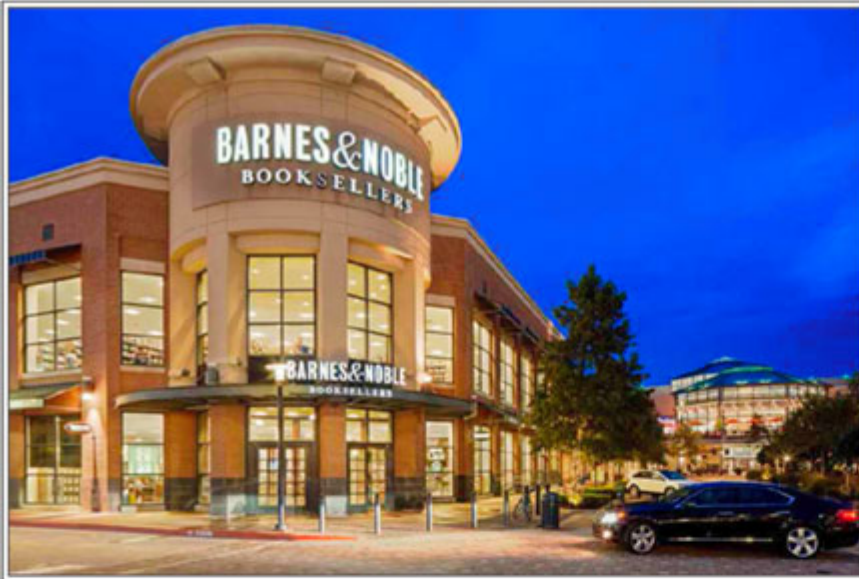
- **Release of Collateral.** Not permitted.

IDA / PILOT. The borrower leases the 30 Hudson Yards Property to the New York City Industrial Development Agency (the “**Agency**”) (the “**Company Lease**”), and the Agency subleases the Mortgaged Property back to the borrower (the “**Agency Lease**”) (the Company Lease and Agency Lease, collectively the “**IDA Leases**”). The benefits of this lease structure to the borrower are a mortgage recording tax exemption and real property tax abatements. As such, the borrower pays installment payments in lieu of real estate taxes as the rent under the Agency Lease (the “**PILOT Payments**”). In order for the PILOT Payments to achieve the same priority as would real estate tax payments (i.e., ahead of any mortgage or other lien), the borrower (with the Agency as holder of the leasehold under the Company Lease) provided mortgages in favor of the Hudson Yards Infrastructure Corporation, a not-for-profit local development corporation (“**HYIC**”) to secure the PILOT Payments (collectively, the “**PILOT Mortgage**”). The HYIC has issued Hudson Yards revenue bonds for which the PILOT Payments are used to repay the bondholders. The term of the IDA Leases runs to June 30, 2044 (such period, the “**Initial Term**”), with annual automatic extensions thereof for a term of one year, unless within 60 days preceding the expiration of the current term the Agency provides written notice of termination to the borrower (such date, the “**Expiration Date**”); provided that after the Initial Term the IDA Leases will automatically terminate within 60 days after the repayment in full or defeasance of any Hudson Yards revenue bonds issued by HYIC for which an assignment of the PILOT amount payable under the Agency Lease is used to repay the bondholders.

- **Terrorism Insurance.** Terrorism coverage is provided by a stand-alone policy that provides coverage for terrorism in an amount equal to the full replacement cost of the 30 Hudson Yards Property, with limits of \$5.5 billion per occurrence and in the aggregate, subject to a \$100,000 deductible. Business interruption is provided for an actual loss sustained basis up to the full policy limit for a period of 36 months plus an additional 12 month extended period of indemnity. See “*Risk Factors—Terrorism Insurance May Not Be Available for All Mortgaged Properties*” in the Preliminary Prospectus.

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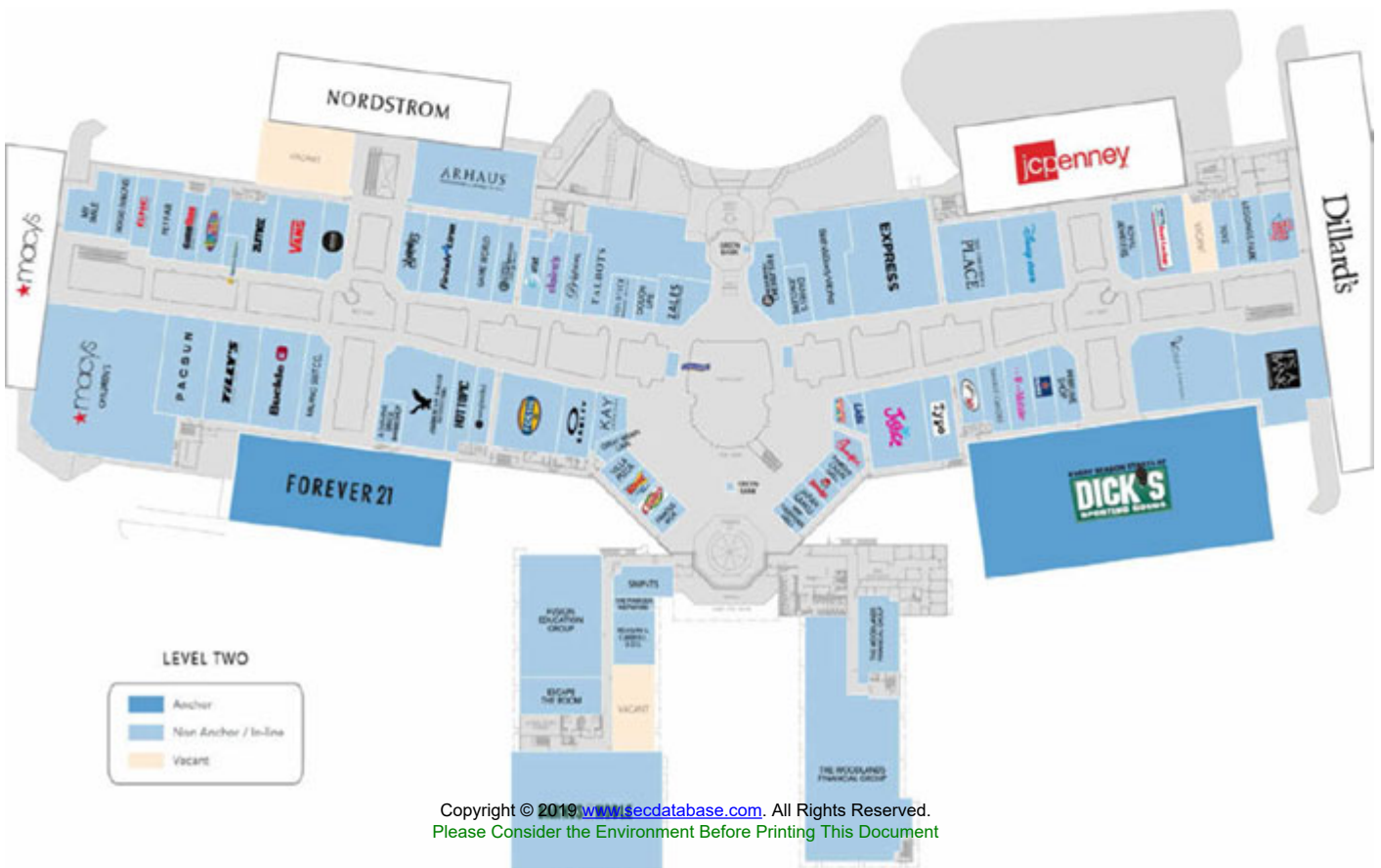
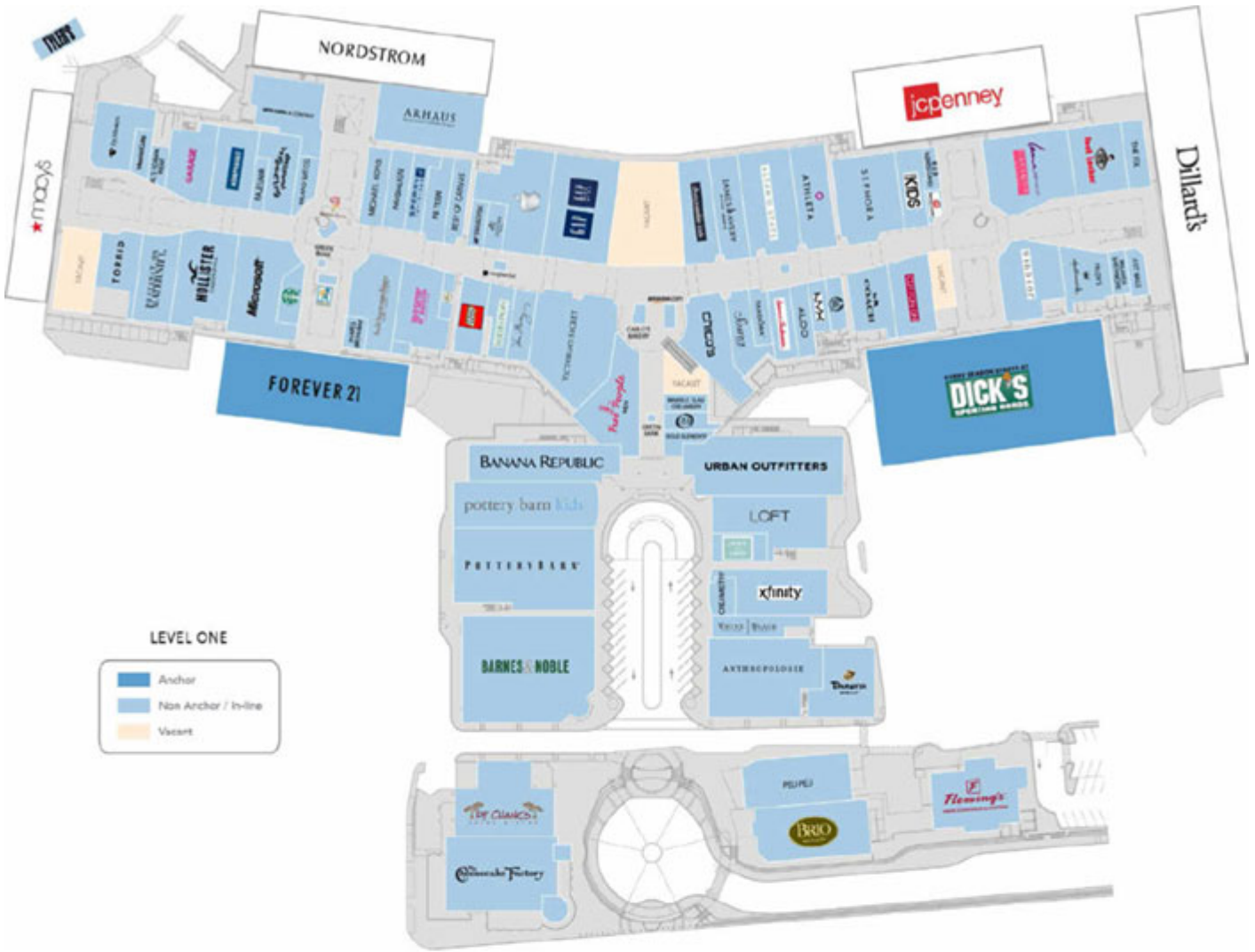
LOAN #2: WOODLANDS MALL



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LOAN #2: WOODLANDS MALL



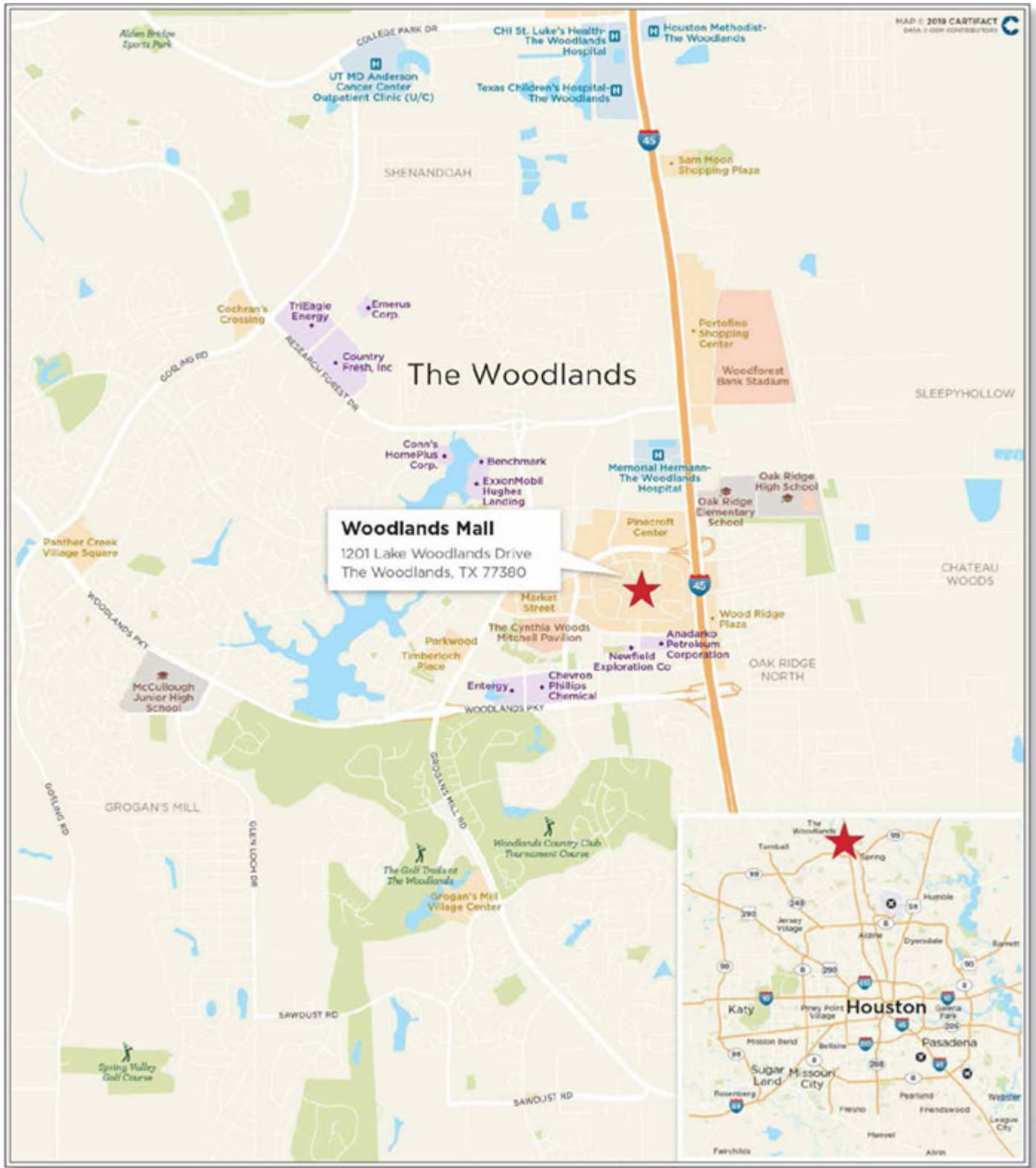
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is included in the Benchmark 2019-B12 trust, and a control appraisal event does not exist, such rights will be exercised by the directing holder of the Benchmark 2019-B12 loan-specific certificates relating to the Woodlands Mall Subordinate Note.

(4) For a full description of Escrows, please refer to “—Escrows” below.

The Mortgage Loan. The mortgage loan (the “**Woodlands Mall Loan**”) is part of a loan combination (the “**Woodlands Mall Loan Combination**”) evidenced by eight *pari passu* notes with an aggregate principal balance as of the Cut-off Date of \$247,600,000 (the “**Woodlands Mall Senior Notes**”) and one subordinate note with a principal balance as of the Cut-off Date of \$177,400,000 (the “**Woodlands Mall Subordinate Note**”). The Woodlands Mall Loan Combination has an aggregate principal balance as of the Cut-off Date of \$425,000,000 and is secured by a first mortgage lien on the borrower’s fee simple interest in a 758,231 SF portion (the “**Woodlands Mall Property**”) of an approximately 1.47 million SF super-regional mall located in The Woodlands, Texas (the “**Woodlands Mall Shopping Center**”). The Woodlands Mall Loan, which is evidenced by the non-controlling notes A-1-1, A-5 and A-7, has an aggregate outstanding principal balance as of the Cut-off Date of \$76,200,000 and represents approximately 6.4% of the Initial Pool Balance. The related companion loans are evidenced by the non-controlling notes A-1-2 (\$21,400,000), A-2 (\$50,000,000), A-4 (\$40,000,000), and A-5 (\$30,000,000), currently held by Deutsche Bank AG, New York Branch (an affiliate of German American Capital Corporation) (“**DBNY**”) and are expected to be contributed to one or more future commercial mortgage securitization transactions. The Woodlands Mall Subordinate Note, which is evidenced by Note B, will be an asset of the trust but will not be pooled together with the other mortgage loans, and payments of interest and principal received in respect of the Woodlands Mall Subordinate Note will be available to make distributions in respect of the related loan-specific classes of certificates only. The holder of the Woodlands Mall Subordinate Note will have the right to appoint the special servicer of the Woodlands Mall Loan Combination and to direct certain decisions with respect to the Woodlands Mall Loan Combination, unless a control appraisal event exists under the related co-lender agreement; *provided* that after the occurrence of a control appraisal event with respect to the Woodlands Mall Subordinate Note, the holder of the Note A-1-1 will have such rights. For so long as the Woodlands Mall Subordinate Note is included in the Benchmark 2019-B12 trust, and a control appraisal event does not exist, such rights will be exercised by the directing holder of the Benchmark 2019-B12 loan-specific certificates relating to the Woodlands Mall Subordinate Note. The Woodlands Mall Loan

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LOAN #2: WOODLANDS MALL

Combination, which accrues interest at an interest rate of 4.25600% *per annum*, was originated by DBNY on July 5, 2019, had an original principal balance of \$425,000,000 and has an outstanding principal balance as of the Cut-off Date of \$425,000,000. The proceeds of the Woodlands Mall Loan Combination along with a \$40,000,000 mezzanine loan were primarily used to refinance prior debt secured by the Woodlands Mall Property, return equity to the borrower sponsors, pay origination costs and fund upfront reserves. The Woodlands Mall Loan received a credit assessment of BBB-sf by Fitch and AAA by Morningstar. S&P confirmed that the Woodlands Mall Loan exhibits credit characteristics that are consistent with investment grade credit.

The Woodlands Mall Loan Combination had an initial term of 120 months and has a remaining term of 120 months as of the Cut-off Date. The Woodlands Mall Loan Combination requires monthly payments of interest only for the entire term. The scheduled maturity date of the Woodlands Mall Loan Combination is the payment date in August 2029. Provided that no event of default has occurred and is continuing under the loan documents, at any time after the earlier to occur of (a) July 5, 2022 and (b) the second anniversary of the closing date of the last securitization of any note comprising the Woodlands Mall Loan Combination, the Woodlands Mall Loan Combination may be defeased with certain "government securities" as permitted under the loan documents. Voluntary prepayment of the Woodlands Mall Loan Combination without payment of any prepayment premium is permitted on or after the due date occurring in April 2029.

Loan Combination Summary				
Note	Original Balance	Cut-off Date Balance	Note Holder	Controlling Piece
A-1-1, A-5, A-7	\$76,200,000	\$76,200,000	Benchmark 2019-B12	No ⁽¹⁾
A-1-2, A-2, A-3, A-4, A-6	\$171,400,000	\$171,400,000	DBNY	No
Total Senior Notes	\$247,600,000	\$247,600,000		
B-Note	\$177,400,000	\$177,400,000	Benchmark 2019-B12 (Loan-Specific)	Yes ⁽¹⁾
Whole Loan	\$425,000,000	\$425,000,000		
Mezzanine Debt	\$40,000,000	\$40,000,000	DBNY	
Total	\$465,000,000	\$465,000,000		

The holder of the Woodlands Mall Subordinate Note will have the right to appoint the special servicer of the Woodlands Mall Loan Combination and to direct certain decisions with respect to the Woodlands Mall Loan Combination, unless a control appraisal event exists under the related co-lender agreement; *provided* that after the occurrence of a control appraisal event with respect to the Woodlands Mall Subordinate Note, the holder of the Woodlands Mall Note A-1-1 will have such rights. For so long as the Woodlands Mall Subordinate Note are included in the Benchmark 2019-B12 securitization, and a control appraisal event does not exist, such rights will be exercised by the Directing Holder of the Benchmark 2019-B12 loan-specific certificates.

(1)

The Mortgaged Property. The Woodlands Mall Property is a 758,231 SF portion of the Woodlands Mall Shopping Center, a two-level enclosed super regional mall that contains approximately 1.47 million SF of gross leasable area. The Woodlands Mall Shopping Center is anchored by Dillard's, Macy's, JCPenney, and Nordstrom, which each separately own their improvements and underlying land and as such are excluded from the Woodlands Mall Loan collateral. The Woodlands Mall Shopping Center is also junior anchored by Dick's Sporting Goods and Forever 21 (both part of the Woodlands Mall Loan collateral). The four major anchors (Dillard's, Macy's, JCPenney, and Nordstrom) have 2018 sales estimates of \$41.0 million, \$73.0 million, \$15.0 million, and \$34.2 million, respectively. As of the trailing 12 months ending May 2019, Dick's Sporting Goods and Forever 21 reported total sales of approximately \$12.7 million and \$7.6 million, respectively.

The Woodlands Mall Property consists of a broad merchandise mix with over 150 specialty retailers including Apple, Athleta, Banana Republic, Coach, Microsoft, Pink, Pottery Barn, Michael Kors, and Sephora. Additionally, there are five office suites at the Woodlands Mall Property, which comprise 38,087 SF. The Woodlands Mall Property also features diverse dining options such as Brio, The Cheesecake Factory, Fleming's Prime Steakhouse, Panera Bread, and P.F. Chang's Asian Bistro, which is complemented by a ten-bay food court located in the lower level of the Woodlands Mall Property. The Apple store is expanding its footprint at the Woodlands Mall Property, and will comprise of 8,409 SF upon expansion, which is expected to be completed in December 2019 (current footprint is 6,311 SF). The borrower sponsor spent approximately \$7.9 million associated with the Apple suite, which involved creation of the space in the center court of the Woodlands Mall Property, including structural work and removal of escalators. The borrower sponsor has

turned over this raw space to Apple and Apple plans to invest significant capital to renovate space. As of the trailing 12 months ending May 2019, the Apple store generated sales of \$50.1 million (\$7,934 PSF (based on SF prior to their expansion)). Other notable features at the Woodlands Mall Property include its outdoor lifestyle shopping area connected to the Woodlands waterway where visitors can experience water taxi service to surrounding offices and residences.

The Woodlands Mall Property has an in-place underwritten occupancy of 95.8% (excluding non-collateral anchors). As of the trailing 12 months ending May 2019, the Woodlands Mall Property generated in-line (<10,000 SF) sales of \$708 PSF with an occupancy cost ratio of 13.4%. Excluding the Apple store, the Woodlands Mall Property generated in-line (<10,000 SF) sales of \$569 PSF with an occupancy cost ratio of 16.8% over the same period.

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LOAN #2: WOODLANDS MALL

The following table presents certain information relating to the major tenants (of which, certain tenants may have co-tenancy provisions) at the Woodlands Mall Property:

Ten Largest Owned Tenants Based on Underwritten Base Rent⁽¹⁾

Tenant Name	Credit Rating (Fitch/MIS/S&P) ⁽²⁾	Tenant GLA	% of Owned GLA	UW Base Rent	% of Total UW Base Rent	UW Base Rent \$ per SF	Tenant Sales \$ per SF	Occupancy Cost	Lease Expiration ⁽³⁾	Renewal / Extension Options
Forever 21	NR / NR / NR	85,150	11.2%	\$1,748,408	5.4%	\$20.53	\$90	22.9%	6/30/2025	1, 5-year option
Dick's Sporting Goods	NR / NR / NR	83,075	11.0	1,536,888	4.7	\$18.50	\$153	16.1	1/31/2027	3, 5-year options
Victoria's Secret	NR / Ba1 / BB	9,474	1.2	729,498	2.2	\$77.00	\$824	15.6	1/31/2027	NAP
Barnes & Noble	NR / NR / NR	30,471	4.0	700,000	2.2	\$22.97	\$268	8.6	1/31/2020	2, 5-year options
Arhaus Furniture	NR / NR / NR	14,484	1.9	665,105	2.0	\$45.92	\$480	11.9	1/31/2025	1, 5-year option
Express	NR / NR / NR	7,429	1.0	638,084	2.0	\$85.89	\$364	23.6	1/31/2021	NAP
Pottery Barn	NR / NR / NR	13,363	1.8	637,956	2.0	\$47.74	\$511	11.2	1/31/2022	NAP
Tyler's	NR / NR / NR	17,116	2.3	597,006	1.8	\$34.88	\$302	15.2	10/31/2023	1, 5-year option
Microsoft	AA+ / Aaa / AAA	6,506	0.9	527,224	1.6	\$81.04	\$834	10.9	6/25/2024	NAP
Altar'd State	NR / NR / NR	6,809	0.9	511,545	1.6	\$75.13	\$571	15.1	1/31/2025	NAP
Ten Largest Owned Tenants		273,877	36.1%	8,291,714	25.5%	\$30.28				
Remaining Owned Tenants		452,171	59.6	24,192,909	74.5	\$53.50				
Vacant Spaces (Owned Space)		32,183	4.2	0	0.0	\$0.00				
Totals / Wtd. Avg. All Owned Tenants⁽³⁾		758,231	100.0%	\$32,484,623	100.0%	\$46.39				

(1) Based on the underwritten rent roll dated May 28, 2019.

(2) Certain ratings are those of the parent company whether or not the parent guarantees the lease.

(3) The Wtd. Avg. UW Base Rent \$ per SF for Owned Tenant excludes 25,819 SF which has no attributable base rent.

The following table presents certain information relating to the lease rollover schedule at the Woodlands Mall Property based on initial lease expiration dates:

Lease Expiration Schedule⁽¹⁾⁽²⁾

Year Ending December 31	Expiring Owned GLA	% of Owned GLA	Cumulative % of Owned GLA	UW Base Rent	% of Total UW Base Rent	UW Base Rent \$ per SF	# of Expiring Tenants ⁽⁴⁾
MTM	1,917	0.3%	0.3%	\$0	0.0%	\$0.00	1
2019	36,616	4.8	5.1%	1,737,188	5.3	47.44	12
2020	70,726	9.3	14.4%	3,013,672	9.3	42.61	20
2021	35,940	4.7	19.1%	2,746,017	8.5	76.41	20
2022	75,799	10.0	29.1%	3,620,453	11.1	47.76	15
2023	44,434	5.9	35.0%	2,313,210	7.1	52.06	11
2024	68,633	9.1	44.1%	3,083,631	9.5	44.93	16
2025	145,211	19.2	63.2%	5,566,083	17.1	38.33	15
2026	33,746	4.5	67.7%	2,439,384	7.5	72.29	14

2027	124,644	16.4	84.1%	3,536,635	10.9	28.37	8
2028	31,094	4.1	88.2%	2,215,426	6.8	71.25	13
2029	38,371	5.1	93.3%	1,636,788	5.0	42.66	9
2030 & Thereafter	18,917	2.5	95.8%	576,137	1.8	30.46	4
Vacant	32,183	4.2	100.0%	NAP	NAP	NAP	NAP
Total / Wtd. Avg.⁽³⁾⁽⁴⁾	758,231	100.0%		\$32,484,623	100.0%	\$46.39	158

-
- (1) Calculated based on the approximate square footage occupied by each collateral tenant.
- (2) Certain tenants may have lease termination options that are exercisable prior to the originally stated expiration date of the subject lease and that are not considered in the Lease Expiration Schedule.
- (3) # of Expiring Tenants excludes approximately 30 temporary/kiosk tenants who operate under short term leases.
- (4) The Wtd. Avg. UW Base Rent \$ per SF for Owned Tenant excludes 25,819 SF which has no attributable base rent.

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LOAN #2: WOODLANDS MALL

The following table presents certain information relating to historical occupancy and estimated tenant sales at the Woodlands Mall Property:

Historical Leased % & In-line Sales⁽¹⁾⁽²⁾

	2010	2011	2012	2013	2014	2015	2016	2017	2018	Current ⁽³⁾
Owned Occupancy including anchors ⁽⁴⁾	93.1%	93.6%	96.1%	96.5%	97.7%	83.8%	96.6%	96.4%	94.9%	97.8%
Owned Occupancy excluding anchors ⁽⁴⁾	91.4%	92.0%	95.4%	95.9%	97.3%	81.3%	96.1%	95.8%	94.2%	95.8%
In-line Tenant (<10,000 SF) Sales per SF ⁽⁵⁾	NAP	NAP	NAP	NAP	NAP	NAP	\$723	\$711	\$717	\$708
In-line Tenant (<10,000 SF) Sales per SF (excl. Apple) ⁽⁴⁾	NAP	NAP	NAP	NAP	NAP	NAP	\$622	\$602	\$590	\$569

(1) Historical Occupancy is based on the average of each respective year.

(2) Not all tenants at the Woodlands Mall Property are required to report sales.

(3) Current occupancy is based on the underwritten rent roll, including recently executed leases. Current sales data is as of the trailing 12 months ending May 31, 2019.

(4) In 2015, occupancy declined due to Dick's Sporting Goods box being added to the Woodlands Mall Property, but not capturing the Dick's Sporting Goods lease as in-place given the store did not open for operation until October 2016.

(5) Apple's sales are based on the tenant's 8,409 SF that it will be expanding into in December 2019 at the Woodlands Mall Property.

■ **Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the Woodlands Mall Property:

Cash Flow Analysis⁽¹⁾

	2016	2017	2018	TTM 5/31/ 2019	Underwritten	Underwritten \$ per SF ⁽²⁾
Base Rent	\$28,621,745	\$31,111,560	\$32,538,184	\$33,313,292	\$32,484,623	\$42.84
Rent Steps ⁽³⁾	0	0	0	0	747,681	\$0.99
Gross Up Vacancy	0	0	0	0	2,965,936	\$3.91
Reimbursements	11,821,126	12,508,578	11,984,194	12,383,926	13,320,934	\$17.57
Other Income ⁽⁴⁾	6,723,425	8,189,537	8,267,824	8,220,484	7,378,029	\$9.73
Vacancy & Credit Loss	(122,935)	(278,970)	172,149	(109,714)	(2,965,936)	(\$3.91)
Effective Gross Income	\$47,043,362	\$51,530,705	\$52,962,351	\$53,807,988	\$53,931,267	\$71.13
Real Estate Taxes	2,779,751	3,901,952	4,054,151	4,370,019	\$5,083,264	\$6.70
Insurance	224,629	212,697	111,713	116,909	116,928	\$0.15
Management Fee	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	\$1.32
Other Operating Expenses	5,083,926	4,894,727	4,619,627	4,614,401	4,614,401	\$6.09
Total Operating Expenses	9,088,306	10,009,375	9,785,492	10,101,329	\$10,814,593	\$14.26
Net Operating Income	\$37,955,056	\$41,521,330	\$43,176,859	\$43,706,659	\$43,116,674	\$56.86
TI/LC	0	0	0	0	758,231	\$1.00
Capital Expenditures	0	0	0	0	151,646	\$0.20
Net Cash Flow	\$37,955,056	\$41,521,330	\$43,176,859	\$43,706,659	\$42,206,797	\$55.66
Occupancy⁽⁵⁾	96.1%	95.8%	94.2%	95.8%	94.8%	
NOI Debt Yield⁽⁶⁾	15.3%	16.8%	17.4%	17.7%	17.4%	
NCF DSCR⁽⁶⁾	3.55x	3.89x	4.04x	4.09x	3.95x	

- Certain items such as straight line rent, interest expense, interest income, lease cancellation income, depreciation, amortization, debt service payments and any other non-recurring or non-operating items were excluded from the historical presentation and are not considered for the underwritten cash flow.
- (2) Underwritten \$ per SF is based on 758,231 SF.
 - (3) Includes \$621,640 of contractual rent steps through June 1, 2020 and the straight line average rent for Microsoft, Starbucks, Sephora, AT&T, Coach and Michael Kors.
 - (4) Other Income consists of % in lieu income (\$550,214), overage rent (\$722,055), specialty leasing income (\$5,488,535), and miscellaneous income (\$617,224), which includes parking revenue, carousal revenue and trash pad/recycling income.
 - (5) TTM Occupancy is based on the underwritten rent roll. Underwritten occupancy is based on the economic occupancy.
 - (6) Metrics are calculated based on the Woodlands Mall Senior Notes.

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LOAN #2: WOODLANDS MALL

- **Appraisal.** According to the appraisal, the Woodlands Mall Property had an “as-is” appraised value of \$953,400,000 as of April 20, 2019.

Appraisal Approach	As-Is Value	Discount Rate	Capitalization Rate
Direct Capitalization Approach	\$957,400,000	NAP	4.25%
Income Capitalization Approach ⁽¹⁾	\$953,400,000	6.75%	4.75% ⁽¹⁾

(1) Represents the terminal capitalization rate.

- **Environmental Matters.** According to a Phase I environmental report, dated May 3, 2019, there are no recognized environmental conditions or recommendations for further action at the Woodlands Mall Property, except that the following actions were recommended: (i) the biomedical waste generated from Unit 4010 (office dental unit) be disposed of in an appropriate manner by a contracted waste hauler, and (ii) continued implementation of the company-wide environmental / asbestos policy.

- **Market Overview and Competition.** The Woodlands Mall Shopping Center is located in The Woodlands, Texas at the intersection of I-45. The Woodlands Mall was originally built across 1994, 2003 and 2016 as a two level enclosed shopping center. The Woodlands Mall Shopping Center is located within Houston’s largest mixed-use development known as The Woodlands, which is located approximately 30 miles north of Houston. Development of The Woodlands began in 1974 by The Woodlands Corporation, a subsidiary of Mitchell Energy and Development Corporation. The Woodlands is a master-planned community that includes residential, commercial, business, and industrial segments, and is designed to be a self-supporting economic entity. The Woodlands is home to more than nearly 112,000 residents and over 900 businesses employing an estimated 40,638 people. Single and multi-family home development totals over 26,000 homes with over five million SF of retail/general commercial space and seven million SF of office and industrial space. Based on current population projections, The Woodlands’ residential component is forecasted to be fully built out by 2020 and is projected to have approximately 130,000 residents.

The following table presents certain information relating to the primary competition for the Woodlands Mall Shopping Center:

Competitive Set⁽¹⁾

	Woodlands Mall ⁽²⁾	Market Street at The Woodlands	Willowbrook Mall	Deerbrook Mall	Houston Premium Outlets
Distance from Subject	NAP	0.1 miles	15 miles	15 miles	20 miles
Property Type	Super Regional Mall	Lifestyle Center	Super-Regional Center/ Mall	Super-Regional Center/ Mall	Outlet Center
Year Built	1994, 2003, 2016	2003	1981	1984	2008
Total GLA	1,468,699	492,244	1,449,632	1,211,733	542,000
Total Occupancy	97.8%	98%	97%	99%	99%
Sales per SF	\$680	\$650	\$610	\$530	\$500
Anchor & Jr. Anchors	Macy’s, Dillard’s, JC Penney, Nordstrom, Dick’s Sporting Goods, Forever 21, Barnes & Noble	HEB, Cinemark	Macy’s, Dillard’s, JC Penney, Nordstrom Rack, Sears, Dick’s Sporting Goods, Forever 21	Macy’s, Dillard’s, JC Penney, Sears, Dick’s Sporting Goods, Forever 21, AMC 24	Saks Off Fifth, Forever 21, Nike Factory Store

- (1) Source: Appraisal.
- (2) Based on Woodlands Mall, including non-collateral anchors.

■ **The Borrower.** The borrower is The Woodlands Mall Associates, LLC (the “**Woodlands Mall Borrower**”), a single purpose, bankruptcy remote single member Delaware limited liability company with two independent directors. Legal counsel to the borrower provided a non-consolidation opinion in connection with the origination of the Woodlands Mall Loan Combination.

The borrower sponsors are Brookfield Property REIT Inc., Brookfield Property Partners L.P. and Brookfield Asset Management Inc. and the non-recourse carveout guarantor is BPR OP, LP, each an affiliate of Brookfield Properties. Brookfield Properties is a fully-integrated, global real estate services company, providing industry-leading development and portfolio management capabilities across the real estate investment strategies of Brookfield Asset Management — a global alternative asset manager with over \$365 billion in assets under management. Brookfield Properties manages or owns approximately 320 million SF of office, retail or multifamily commercial real estate worldwide.

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LOAN #2: WOODLANDS MALL

Lockbox and Cash Management. The Woodlands Mall Loan Combination is structured with a hard lockbox and springing cash management. The Woodlands Mall Borrower was required at loan origination to deliver letters to all tenants at the Woodlands Mall Property directing them to deposit all rents and payments into a lender controlled lockbox account. To the extent no Cash Sweep Period (as defined below) is continuing, all funds in the lockbox account are required to be transferred to or at the direction of the Woodlands Mall Borrower. Following the occurrence and during the continuance of a Cash Sweep Period, all funds in the lockbox account are required to be swept each business day to a segregated cash management account under the control of the lender and disbursed in accordance with the loan documents.

During the continuance of a Cash Sweep Period, all excess cash will remain in the lender controlled account and held as additional collateral for the Woodlands Mall Loan Combination; *provided, however*, that if a Major Anchor Sweep Period (as defined below) is then continuing the excess cash will be deposited into a major anchor sweep reserve account to be applied pursuant to the loan documents.

A “**Cash Sweep Period**” means any period during the continuance of (i) an event of default under the loan documents, (ii) during a bankruptcy action of the Woodlands Mall Borrower or the guarantor, (iii) any Low DSCR Trigger Period (as defined below), (iv) a mezzanine loan default or (v) the continuance of a Major Anchor Sweep Period (as defined below), until such time that Woodlands Mall Borrower has cured the applicable Cash Sweep Period in accordance with the terms of the loan documents.

A “**Low DSCR Trigger Period**” means any period during the continuance of which (i) the debt service coverage ratio based on the Woodlands Mall Loan Combination is less than 2.00x or (ii) the combined debt service coverage ratio based on the Woodlands Mall Loan Combination and related mezzanine loan is less than 1.45x and will end on the earlier to occur (a) the date a debt service coverage ratio of at least 2.00x and (b) a combined debt service coverage ratio of at least 1.45x is achieved for as of any debt service coverage ratio calculation date, as determined by the lender.

A “**Major Anchor Sweep Period**” will commence upon any of (a) the early termination, early cancellation or early surrender of the Major Anchor (as defined below) premises or upon the Woodlands Mall Borrower’s receipt of notice by a Major Anchor of its intent to effect an early termination, early cancellation or early surrender with respect its respective premises, (b) if a Major Anchor has ceased its business (“goes dark”) at substantially all of its space or (c) a bankruptcy action of any Major Anchor or its direct or indirect parent.

A Major Anchor Sweep Period will end (a) if such Major Anchor premises are owned by the Woodlands Mall Borrower or an affiliate of the Woodlands Mall Borrower, (i) the applicable Major Anchor Lease has been renewed pursuant to its terms or (ii) a portion of the Major Anchor premises equal to at least the Occupancy Threshold (as defined below) has been re-tenanted to one or more retail or related use (or such other use as is approved by the lender in its sole and absolute discretion) and in a manner which is not inconsistent with the operation of the balance of the Woodlands Mall Property and such Major Anchor premises have been re-tenanted pursuant to the loan documents, (b) if such Major Anchor premises are not owned by the Woodlands Mall Borrower or an affiliate of the Woodlands Mall Borrower, a portion of the Major Anchor premises equal to at least the Occupancy Threshold has been re-tenanted to or is otherwise owned and occupied by open or more retail use (or such other use approved by the lender in its sole discretion) tenants or owner and operator.

A “**Major Anchor**” is any of (a) Nordstrom, (b) Macy’s, (c) Dillard’s, (d) JCPenney or (e) any other owner, operator or tenant with respect to substantially all of any space occupied by such anchor tenants.

The “**Occupancy Threshold**” is (i) if a Major Anchor premises are 150,000 SF or greater, then 65% of such Major Anchor premises occupied or (ii) if the Major Anchor premises are less than 150,000 SF, then 80% of such Major Anchor premises occupied.

Escrows. In connection with the origination of the Woodlands Mall Loan, the Woodlands Mall Borrower funded rollover reserves of a \$2,174,886 for outstanding tenant improvements.

On each due date during the continuance of a Cash Sweep Period, the Woodlands Mall Borrower will be required to fund the following reserves, (i) 1/12th of the taxes that the lender estimates will be payable over the next-ensuing 12-month period, (ii) 1/12th of the amount that the lender estimates will be necessary to pay insurance premiums for the renewal of coverage, provided that an insurance reserve will be waived if the Woodlands Mall Property is covered under an acceptable blanket policy, (iii) a monthly replacement reserve deposit of \$15,720, subject to a cap of

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LOAN #2: WOODLANDS MALL

\$377,291, (iv) a monthly rollover deposit of \$125,764, subject to a cap of \$3,018,324, (v) during the continuance of a Major Anchor Sweep Period, all excess funds (after payment of all amounts due under the loan documents, including the monthly reserves) will be swept into a subaccount of the cash management account to be held as additional collateral for the Woodlands Mall Loan Combination until an aggregate amount equal to the Individual Major Anchor Cap (as defined below) for all Major Anchor Periods then existing has been deposited into such subaccount.

An “**Individual Major Anchor Cap**” means (x) if a Major Anchor Sweep Period has occurred with respect to either JCPenney or Nordstrom, an amount equal to not less than the product obtained by multiplying \$75.00 by the aggregate amount of gross leasable SF of the Major Anchor premises previously occupied by the applicable Major Anchor and (y) if a Major Anchor Sweep Period has occurred with respect to either Dillard’s or Macy’s, an amount equal to not less than the product obtained by multiplying \$100.00 by the aggregate amount of gross leasable SF of the Major Anchor premises previously occupied by the applicable the Major Anchor.

- **Property Management.** The Woodlands Mall Property is self-managed.

Current Mezzanine or Subordinate Indebtedness. In connection with origination of Woodlands Mall Loan Combination, DBNY provided a mezzanine loan with a principal balance of \$40.0 million (the “**Woodlands Mall Mezzanine Loan**”) to an affiliate of the Woodlands Mall Borrower. The Woodlands Mall Mezzanine Loan is secured by a pledge of the direct equity interest in the Woodlands Mall Borrower and is co-terminous with the Woodlands Mall Loan Combination. The Woodlands Mall Mezzanine Loan accrues interest at a rate of 5.50000% *per annum* and is fully amortizing by the August 1, 2029 maturity date. The Woodlands Mall Mezzanine Loan is expected to be sold to a third party. Based on the combined Woodlands Mall Loan Combination and the Woodlands Mall Mezzanine Loan, the cumulative Cut-off Date LTV is 48.8%, the cumulative U/W NCF DSCR is 1.79x and the cumulative U/W NOI Debt Yield is 9.3%. The rights of the mezzanine lender under the Woodlands Mall Mezzanine Loan are further described under “*Description of the Mortgage Pool—Additional Indebtedness—Mezzanine Indebtedness*” in the Preliminary Prospectus.

Total Debt Metrics

	% of Total Debt	Cut-off Date Cumulative LTV	UW Cumulative NOI Debt Yield	UW Cumulative NCF DSCR
A-Notes \$247,600,000	53.2%	26.0%	17.4%	3.95x
B-Notes \$177,400,000	38.2%	44.6%	10.1%	2.30x
Mezzanine \$40,000,000	8.6%	48.8%	9.3%	1.79x

Permitted Future Mezzanine or Subordinate Indebtedness. From and after the last securitization of any note comprising the Woodlands Mall Loan Combination and provided no loan event of default under the loan documents has occurred and is continuing, the Woodlands Mall Borrower will have a one-time right to cause a permitted mezzanine borrower to incur additional indebtedness secured by a pledge of the direct or indirect equity interest in the Woodlands Mall Borrower in the form of a junior mezzanine loan (the “**Permitted Mezzanine Loan**”), subject to the consent of the lender and the satisfaction of certain conditions, including but not limited to: (i) the principal amount of the Permitted Mezzanine Loan is not greater than an amount equal to the lesser of (A) \$35,000,000; (B) the amount which will yield an aggregate loan-to-value ratio (including the Woodlands Mall Loan Combination and the proposed Permitted Mezzanine Loan) of 52%; (C) the amount which would yield a permitted mezzanine debt service coverage ratio that is 1.25x; and (D) the amount which will yield a combined debt yield of 8.6%; (ii) the Permitted Mezzanine Loan lender is not an affiliate of the Woodlands Mall Borrower; (iv) the Permitted Mezzanine Loan lender and the existing mezzanine loan lender have entered into an intercreditor agreement; (v) the maturity date of the Permitted Mezzanine Loan is co-terminous with the maturity date of the Woodlands Mall Loan Combination and will fully amortize on the Woodlands Mall Loan Combination maturity date; (vi) the lender has received a rating agency confirmation from the applicable rating agencies confirming that the Permitted Mezzanine Loan will not cause a downgrade, withdrawal or qualification of the then current rating of

the securities or any class thereof; and (vii) the Woodlands Mall Borrower will pay all of the lender's reasonable out-of-pocket costs and expenses in connection with such Permitted Mezzanine Loan.

■ **Release of Collateral.** The Woodlands Mall Borrower may obtain the release of (A) one or more vacant, non-income producing and unimproved parcels or outlots or (B) any parcel of land, which includes any Major Anchor premises, together with any improvements located on such parcel or outlot, that (a) constitutes an integral part of, or adjoins to, or is proximately located near the Woodlands Mall of which the Woodlands Mall Property is a part, (b) was not owned

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LOAN #2: WOODLANDS MALL

by the Woodlands Mall Borrower on the origination date, and (c) is not an Acquired Parcel (as defined below) (clause (B) collectively, an “**Expansion Parcel**”), upon satisfaction of specified conditions including, among other things, that (i) there is no event of default, (ii) the parcel subject to the release is not necessary for the remaining Woodlands Mall Property to comply with zoning or legal requirements, (iii) the release will not result in the downgrade, withdrawal or qualification of the then current rating assigned to any class of certificates, (iv) the release will not result in an loan to value ratio that does not comply with REMIC guidelines and (v) the release will not result in a material diminution in the value of the Woodlands Mall Property. In addition, with respect to an Expansion Parcel that is a Major Anchor premises, such Major Anchor premises may be released with the reasonable consent of the lender to another retail operator that has agreed in writing to open and operate the Major Anchor premises for retail use within 24 months from the date of release and no reserves have been expended with respect to such Major Anchor premises.

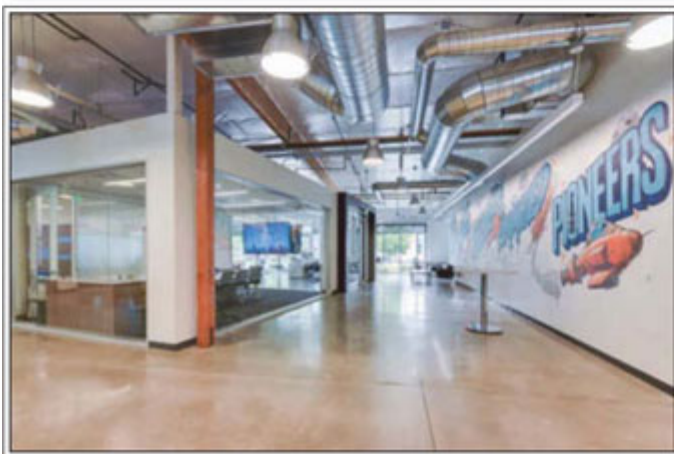
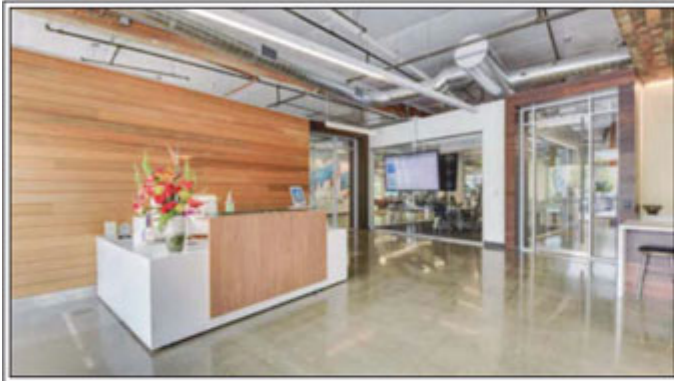
In addition, the Woodlands Mall Borrower is permitted to obtain the release of collateral parcels (an “**Exchange Parcel**”) from the lien of the mortgage in exchange for the substitution of new parcels (each, an “**Acquired Parcel**”) as collateral for the Woodlands Mall Loan Combination upon 20 days prior notice, subject to the satisfaction of certain conditions, including among other things, that: (i) the Exchange Parcel is vacant, non-income producing and unimproved or improved only by landscaping, utility facilities that are readily re-locatable or surface parking areas and the Exchange Parcel is not necessary for the Woodlands Mall Property to comply with any zoning, building, land use or parking or other legal requirements applicable to the Woodlands Mall Property, (ii) with respect to the Acquired Parcel, the Woodlands Mall Borrower has delivered, among other things (a) an environmental report acceptable to the lender, (b) title insurance, (c) if the Acquired Parcel is improved, a property condition report indicating that the Acquired Parcel is in good condition and (d) if repairs are recommended by the property condition report or if the environmental report discloses the presence of hazardous materials at the Acquired Parcel, in an amount equal to or greater than \$21,250,000, cash or a guaranty from the guarantor in an amount equal to 125% of any estimated repairs or remediation costs, as applicable, (iii) the loan-to-value ratio of the remaining Woodlands Mall Property (after giving effect to such substitution) is equal to or less than 125% (in compliance with REMIC guidelines) unless the Acquired Parcel has a fair market value equal to or greater than the fair market value of the Exchange Parcel and (iv) the substitution does not adversely affect the debt service coverage ratio of the Woodlands Mall Loan Combination except in a *de minimis* manner. See “**Description of the Mortgage Pool—Certain Terms of the Mortgage Loans—Partial Releases**” in the Preliminary Prospectus

- Acquired Expansion Parcels.** The Woodlands Mall Borrower has the right, at its own expense, to acquire one or more parcels of land that constitutes an integral part of, or adjoins, the Woodlands mall, which land was not owned by the Woodlands Mall Borrower on the origination date (such acquired land, an “**Expansion Parcel**”), to become additional collateral for the Woodlands Mall Loan Combination, upon satisfaction of specified conditions including, among other things, that (i) there is no event of default, (ii) the Woodlands Mall Borrower acquires a fee simple or leasehold interest to the applicable Expansion Parcel and (iii) the expansion does not adversely affect the debt service coverage ratio except in a *de minimis* manner.
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- Terrorism Insurance.** The loan documents require that the “all-risk” insurance policy required to be maintained by the Woodlands Mall Borrower provides coverage for terrorism in an amount equal 100% of the replacement cost of the Woodlands Mall Property, or that if the Terrorism Risk Insurance Program Reauthorization Act is no longer in effect and such policies contain an exclusion for acts of terrorism, the Woodlands Mall Borrower will obtain, to the extent available, a stand-alone policy that provides the same coverage as the policies would have if such exclusion did not exist. See “**Risk Factors—Terrorism Insurance May Not Be Available for All Mortgaged Properties**” in the Preliminary Prospectus.
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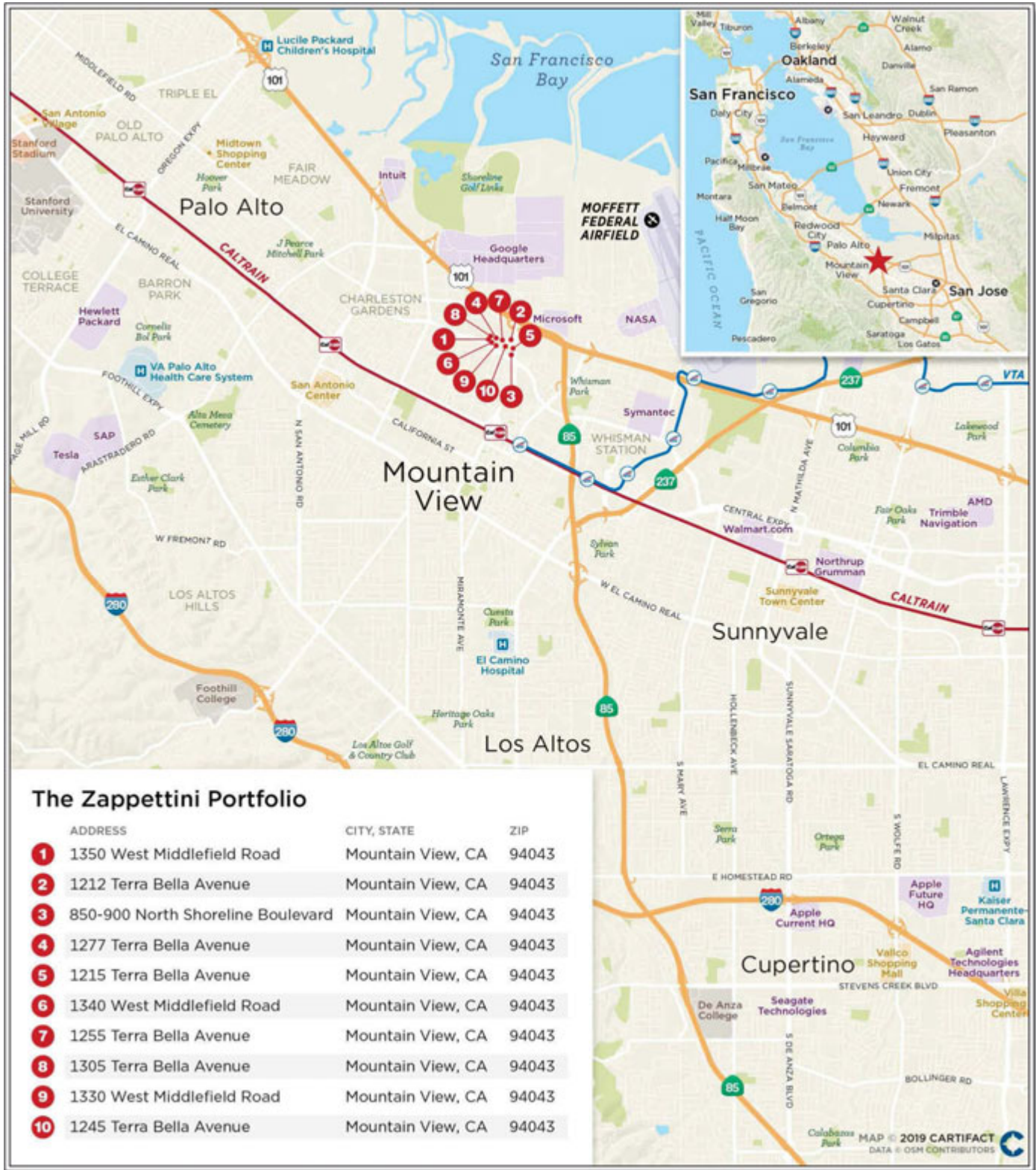
LOAN #3: THE ZAPPETTINI PORTFOLIO



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California, comprising 251,575 SF of net rentable area (each, a “**The Zappettini Portfolio Property**” and together “**Zappettini Portfolio Properties**”). The Zappettini Portfolio Loan, which is evidenced by the controlling note A-1, had an original principal balance of \$65,000,000, has a Cut-off Date Balance of \$65,000,000 and represents approximately 5.5% of the Initial Pool Balance. The Zappettini Portfolio Loan Combination had an original principal balance of \$120,000,000 and has an outstanding principal balance as of the Cut-off Date of \$120,000,000. The non-controlling note A-2, which had an original principal balance of \$55,000,000 and has an outstanding principal balance as of the Cut-off Date of \$55,000,000, is currently held by Citi Real Estate Funding Inc. (“**CREFI**”) and is expected to be contributed to one or more future securitization transactions. The Zappettini Portfolio Loan Combination, which accrues interest at a fixed rate of 4.30000% *per annum*, was originated by CREFI on May 31, 2019. The proceeds of The Zappettini Portfolio Loan Combination were primarily used to pay off existing debt, fund the buyout of previous partners’ interests, return equity to the sponsor, fund upfront reserves and pay closing costs.

The Zappettini Portfolio Loan Combination had an initial term of 60 months and has a remaining term of 58 months as of the Cut-off Date. The Zappettini Portfolio Loan Combination requires monthly payments of interest only for the term of The Zappettini Portfolio Loan Combination. The scheduled maturity date of The Zappettini Portfolio Loan Combination is the due date in June 2024. Provided no event of default has occurred and is continuing, at any time after the earlier to occur of (i) May 31, 2022 and (ii) the second anniversary of the last securitization of a note comprising part of The Zappettini Portfolio Loan Combination (the “**Release Date**”), The Zappettini Portfolio Loan Combination may be defeased with certain direct full faith and credit obligations of the United States of America or other obligations which are “government securities” permitted under The Zappettini Portfolio Loan documents. The Zappettini Portfolio Loan Combination may be prepaid with payment of a yield maintenance premium at any time prior to the due date occurring in December 2023. Voluntary prepayment of The Zappettini Portfolio Loan Combination is permitted on or after the due date occurring in December 2023 without payment of any prepayment premium.

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LOAN #3: THE ZAPPETTINI PORTFOLIO

The Zappettini Portfolio Loan Combination Summary				
Note	Original Balance	Cut-off Date Balance	Note Holder	Controlling Piece
A-1	\$65,000,000	\$65,000,000	Benchmark 2019-B12	Yes
A-2	\$55,000,000	\$55,000,000	CREFI ⁽¹⁾	No
Total	\$120,000,000	\$120,000,000		

(1) Note A-2 is currently held by CREFI and is expected to be contributed to one or more future securitization transactions.

- **The Mortgaged Properties.** The Zappettini Portfolio Properties are comprised of 251,575 SF of suburban office space across 10 buildings all of which are located in Mountain View, California.

Portfolio Summary⁽¹⁾

<u>Property Name</u>	<u>Year Built / Renovated</u>	<u>SF</u>	<u>Allocated Loan Combination Cut-off Date Balance</u>	<u>% Allocated Loan Combination Original Balance</u>	<u>Appraisal Date⁽²⁾</u>	<u>Appraised Value⁽²⁾</u>	<u>% Appraised Value⁽²⁾</u>	<u>UW NCF</u>	<u>% of UW NCF</u>
1350 West Middlefield	1975 / NAP	29,670	\$9,100,000	14.0%	5/7/2019	\$22,700,000	12.1%	1,435,544	15.0%
1212 Terra Bella	1976 / NAP	37,166	8,796,667	13.5	5/7/2019	26,500,000	14.1	1,273,068	13.3
850 – 900 North Shoreline	1969 / NAP	31,347	8,775,000	13.5	5/7/2019	24,300,000	13.0	1,287,244	13.5
1277 Terra Bella	1962 / 2017	24,000	8,666,667	13.3	5/7/2019	22,000,000	11.7	1,281,065	13.4
1215 Terra Bella	1974 / NAP	25,000	6,315,292	9.7	5/7/2019	17,800,000	9.5	915,046	9.6
1340 West Middlefield	1977 / NAP	25,000	5,997,333	9.2	5/7/2019	17,300,000	9.2	856,630	9.0
1255 Terra Bella	1990 / NAP	17,980	4,888,542	7.5	5/7/2019	14,100,000	7.5	695,611	7.3
1305 Terra Bella	1977 / NAP	20,732	4,241,250	6.5	5/7/2019	14,100,000	7.5	631,417	6.6
1330 West Middlefield	1975 / NAP	25,000	4,197,917	6.5	5/7/2019	17,000,000	9.1	572,850	6.0
1245 Terra Bella	1965 / NAP	15,680	4,021,333	6.2	5/7/2019	11,600,000	6.2	606,667	6.3
Total / Wtd. Avg.		251,575	\$65,000,000	100.0%		\$187,400,000	100.0%	\$9,555,142	100.0%

(1) Based on the underwritten rent rolls dated as of May 21, 2019 for the 850 – 900 North Shoreline property and as of August 6, 2019 for the remaining properties.

(2) Source: Appraisal.

The Zappettini Portfolio Properties are 100% occupied by tenants, including Google, Inc. (“**Google**”), The County of Santa Clara, and Elementum SCM, Inc. (“**Elementum**”) amongst others. The Zappettini Portfolio Properties are located directly across Freeway 101 from Google’s global headquarters and Microsoft’s Silicon Valley campus. The City of Mountain View is currently developing a growth plan, known as the Terra Bella Vision Plan, which is aimed at a complete redevelopment of a 110-acre area which includes the area where the Zappettini Portfolio Properties are located. According to the City of Mountain View’s planning personnel, the overall planned changes are expected to take place in the next three to five years and it is expected that this will have a positive value impact on the Zappettini Portfolio Properties.

Six of the ten properties were developed by the sponsor for The Zappettini Portfolio Loan and the remaining four properties were acquired between 2016 and 2018. Each building is occupied by a single tenant other than the 850 – 900 North Shoreline property, which is occupied by two tenants. Across the portfolio, tenants have been at the Zappettini Portfolio Properties for a weighted average lease term of approximately 9.1 years. Additionally, approximately 42.8% of

the Zappettini Portfolio Properties is leased to investment grade tenants, which include Elementum, Google and The County of Santa Clara. According to the appraisal, the leases at the Zappettini Portfolio Properties range from 0.5% above to 51.1% below market rent with a weighted average below market rent of 21.5%.

Elementum SCM, Inc.

Elementum leases a total of 49,000 SF in two buildings within the Zappettini Portfolio Properties. Elementum leases and occupies the entire 24,000 SF at the 1277 Terra Bella mortgaged property pursuant to a lease that commenced in September 2017 and expires in December 2024. At any time on or after December 31, 2020, Elementum may terminate its lease at the 1277 Terra Bella property with written notice at least nine months prior to the effective date of termination. Elementum also leases the entire 25,000 SF at the 1215 Terra Bella mortgaged property pursuant to a lease that commenced in February 2018 and expires in January 2023. At any time after January 31, 2021, Elementum may terminate its lease at the 1215 Terra Bella property with written notice at least nine months prior to the effective date of termination. However, Elementum currently subleases its space at the 1215 Terra Bella mortgaged property to two tenants. Firewood Marketing, Inc., which occupies 12,861 SF of space with a sublease dated July 31, 2018 that expires on January 31, 2021 and Glowlink Communications Technology, Inc., which occupies 12,139 SF of space with a sublease dated October 25, 2018 that also expires on January 31, 2021. Elementum's short term plan is to sublease this space until they require more space in the future. Elementum provides mobile platform development

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LOAN #3: THE ZAPPETTINI PORTFOLIO

services. It offers data, cloud, and mobile technology solutions for supply chain management to automotive, healthcare, industrial and technology clients throughout the United States.

Egnyte, Inc.

Egnyte, Inc. occupies the entire 29,670 SF at the 1350 West Middlefield property, on a triple-net lease that commenced in March 2014 and expires in April 2024. The tenant does not have any renewal options under the lease. Egnyte, Inc. can terminate its lease at any time after April 30, 2022 with at least nine months' written notice. The 1350 West Middlefield property is the location of its headquarters. Egnyte, Inc. is a privately held company, founded in 2007, which provides content collaboration, data protection and infrastructure modernization services to customers in various industries.

Google, Inc. (Planet Labs, Inc.)

Google occupies the entire 17,980 SF, at the 1255 Terra Bella property. Planet Labs, Inc. occupies the entire 15,680 SF, at the 1245 Terra Bella property, on a sublease with Google that commenced in April 2017 and expires in March 2021. Google guarantees Planet Labs, Inc.'s sublease and is a shareholder of Planet Labs, Inc. Planet Labs, Inc. is a private Earth imaging company based in San Francisco, California. The company's goal is to image the entirety of the planet daily to monitor changes and pinpoint trends.

The following table presents certain information relating to the major tenants (of which certain tenants may have co-tenancy provisions) at the Zappettini Portfolio Properties:

Largest Owned Tenants by Underwritten Base Rent⁽¹⁾

Tenant Name	Credit Rating (Fitch/MIS/ S&P) ⁽²⁾	Tenant GLA	% of GLA	UW Base Rent ⁽³⁾	% of Total UW Base Rent ⁽³⁾	UW Base Rent \$ per SF ⁽³⁾	Lease Expiration	Renewal / Extension Options
Elementum SCM, Inc. ⁽⁴⁾⁽⁶⁾	BBB- / Baa3 / BBB-	49,000	19.5%	\$2,345,760	22.8%	\$47.87	1/31/2023	One, Five year extension
Egnyte, Inc. ⁽⁵⁾	BB / B2 / BB	29,670	11.8	1,520,291	14.8	51.24	4/30/2024	NAP
Google, Inc. ⁽⁶⁾	NR / Aa2 / AA+	33,660	13.4	1,395,669	13.6	41.46	3/10/2021	NAP
Iridex Corporation	NR / NR / NR	37,166	14.8	1,355,147	13.2	36.46	2/28/2022	NAP
Nuro, Inc. ⁽⁷⁾	NR / NR / NR	25,000	9.9	911,550	8.9	36.46	8/15/2023	NAP
Zendesk (X Motors) ⁽⁶⁾	NR / NR / NR	16,613	6.6	867,199	8.4	52.20	12/31/ 2021	NAP
Vimo, Inc.	NR / NR / NR	20,732	8.2	671,717	6.5	32.40	6/30/2023	NAP
The County of Santa Clara	AA+ / NR / AAA	25,000	9.9	623,099	6.1	24.92	9/30/2021	One, Two-year extension
Vita Insurance Associates, Inc. ⁽⁸⁾	NR / NR / NR	14,734	5.9	592,846	5.8	40.24	12/31/ 2026	One, Three-year extension
Largest Owned Tenants		251,575	100.0%	\$10,283,276	100.0%	\$40.88		
Vacant		0	0.0	0	0	0		
Total / Wtd. Avg. All Tenants		251,575	100.0%	\$10,283,276	100.0%	\$40.88		

(1) Based on the underwritten rent rolls dated as of May 21, 2019 for the 850 – 900 North Shoreline property and as of August 6, 2019 for the remaining properties.

(2) Certain ratings are those of the parent company whether or not the parent guarantees the lease.

(3) UW Base Rent, % of Total UW Base Rent and UW Base Rent \$ per SF includes approximately \$262,799 in contractual rent steps through May 2020 and \$32,099 which represents the present value of rent steps for The County of Santa Clara.

- At any time after January 31, 2021, Elementum may terminate its lease at the 1215 Terra Bella property with written notice at least nine months prior to the effective date of termination. At any time on or after December 31, 2020, Elementum may terminate its lease at the 1277 Terra Bella property with written notice at least nine months prior to the effective date of termination.
- (4) At any time after April 30, 2022, Egnyte, Inc. may terminate its lease at the 1350 West Middlefield property with written notice at least nine months prior to the effective date of termination.
- (5) Several of the properties are subleased. Google is currently subleasing the 1245 Terra Bella property (15,680 SF) to Planet Labs, Inc. Google guarantees the sublease and currently is a shareholder in Planet Labs, Inc. Elementum is currently subleasing the 1215 Terra Bella property to Firewood Marketing, Inc and Glowlink, with a plan to move into these properties once they require the space and have to expand. Zendesk is currently subleasing the 850 – 900 North Shoreline property to XMotors. XMotors will take over the lease officially in 2020 with an expiration of 2021
- (6) At any time after February 1, 2022, Nuro, Inc. may terminate its lease at the 1340 West Middlefield property with written notice at least nine months prior to the effective date of termination.
- (7) At any time after December 31, 2020, Vita Insurance Associates, Inc. may terminate its lease at the 850 – 900 North Shoreline property with written notice at least six months prior to the effective date of termination.
- (8)

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LOAN #3: THE ZAPPETTINI PORTFOLIO

The following table presents certain information relating to the lease rollover schedule at the Zappettini Portfolio Properties, based on initial lease expiration dates:

Lease Expiration Schedule⁽¹⁾⁽²⁾

Year Ending December 31	Expiring Owned GLA	% of Owned GLA	Cumulative % of Owned GLA	UW Base Rent ⁽³⁾	% of Total UW Base Rent ⁽³⁾	UW Base Rent \$ per SF ⁽³⁾	# of Expiring Tenants
MTM	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2019	0	0.0	0.0%	0	0.0	\$0.00	0
2020	0	0.0	0.0%	0	0.0	\$0.00	0
2021	75,273	29.9	29.9%	2,885,966	28.1	\$38.34	3
2022	37,166	14.8	44.7%	1,355,147	13.2	\$36.46	1
2023	70,732	28.1	72.8%	2,555,267	24.8	\$36.13	3
2024	53,670	21.3	94.1%	2,894,051	28.1	\$53.92	2
2025	0	0.0	94.1%	0	0.0	\$0.00	0
2026	14,734	5.9	100.0%	592,846	5.8	\$40.24	1
2027	0	0.0	100.0%	0	0.0	\$0.00	0
2028	0	0.0	100.0%	0	0.0	\$0.00	0
2029	0	0.0	100.0%	0	0.0	\$0.00	0
2030 & Beyond	0	0.0	100.0%	0	0.0	\$0.00	0
Vacant	0	0.0	100.0%	NAP	NAP	NAP	NAP
Total / Wtd. Avg.	251,575	100.0%		\$10,283,276	100.0%	\$40.88	10

(1) Calculated based on the approximate square footage occupied by each collateral tenant.

(2) Certain tenants may have lease termination options that are exercisable prior to the originally stated expiration date of the subject lease and that are not considered in the Lease Expiration Schedule.

(3) UW Base Rent, % of Total UW Base Rent and UW Base Rent \$ per SF includes approximately \$262,799 in contractual rent steps through May 2020 and \$32,099 which represents the present value of rent steps for The County of Santa Clara.

The following table presents certain information relating to historical leasing at the Zappettini Portfolio Properties:

Historical Leased %⁽¹⁾

Property	2016	2017	2018	Most Recent ⁽²⁾
1350 West Middlefield	100.0%	100.0%	100.0%	100.0%
1212 Terra Bella	100.0%	100.0%	100.0%	100.0%
850 - 900 North Shoreline	NAV	100.0%	100.0%	100.0%
1277 Terra Bella	NAV	NAV	100.0%	100.0%
1215 Terra Bella	100.0%	NAV	100.0%	100.0%
1340 West Middlefield	100.0%	100.0%	NAV	100.0%
1255 Terra Bella	83.3%	100.0%	100.0%	100.0%
1305 Terra Bella	100.0%	100.0%	100.0%	100.0%
1330 West Middlefield	100.0%	100.0%	100.0%	100.0%
1245 Terra Bella	83.3%	100.0%	100.0%	100.0%

(1) Historical occupancies are as of December 31 of each respective year.

(2) Most Recent occupancy is based on the underwritten rent roll dated as of May 21, 2019 for the 850 – 900 North Shoreline property and as of August 6, 2019 for the remaining properties.

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- **Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the Underwritten Net Cash Flow at the Zappettini Portfolio Properties:

Cash Flow Analysis⁽¹⁾

	2016	2017	2018	Trailing 12 3/19	Underwritten	Underwritten \$ per SF
Base Rent ⁽²⁾	\$6,674,789	\$6,294,118	\$8,083,005	\$8,499,156	\$9,988,378	\$39.70
Rent Steps ⁽³⁾	0.00	0.00	0.00	0.00	294,898	1.17
Potential Income from Vacant Space	0.00	0.00	0.00	0.00	0.00	0.00
Reimbursements	894,460	933,417	1,569,368	1,697,995	1,248,327	4.96
Gross Potential Rent	\$7,569,249	\$7,227,536	\$9,652,372	\$10,197,152	\$11,531,604	\$45.84
Economic Vacancy & Credit Loss ⁽⁴⁾	0.00	0.00	0.00	0.00	(576,580)	(2.29)
Effective Gross Income	\$7,569,249	\$7,227,536	\$9,652,372	\$10,197,152	\$10,955,024	\$43.55
Real Estate Taxes	\$285,882	\$410,259	\$727,851	\$725,322	\$662,841	\$2.63
Insurance	241,961	285,943	476,533	545,963	65,190	0.26
Management Fee	227,077	216,826	289,571	305,915	328,651	1.31
Other Operating Expenses	311,281	419,377	353,489	340,306	307,791	1.22
Total Operating Expenses	\$1,066,201	\$1,332,405	\$1,847,444	\$1,917,505	\$1,364,472	\$5.42
Net Operating Income⁽⁵⁾	\$6,503,048	\$5,895,131	\$7,804,928	\$8,279,647	\$9,590,551	\$38.12
Replacement Reserves	0.00	0.00	0.00	0.00	35,410	0.14
TI/LC	0.00	0.00	0.00	0.00	0.00	0.00
Net Cash Flow	\$6,503,048	\$5,895,131	\$7,804,928	\$8,279,647	\$9,555,142	\$37.98
Occupancy	97.1%	91.3%	90.1%	100.0%⁽⁶⁾	95.0%⁽⁴⁾	
NOI Debt Yield⁽⁷⁾	5.4%	4.9%	6.5%	6.9%	8.0%	
NCF DSCR⁽⁷⁾	1.24x	1.13x	1.49x	1.58x	1.83x	

(1) Certain items such as straight line rent, interest expense, interest income, lease cancellation income, depreciation, amortization, debt service payments and any other non-recurring or non-operating items are not considered for the underwritten cash flow.

(2) Based on the underwritten rent rolls dated as of May 21, 2019 for the 850 – 900 North Shoreline property and the underwritten rent roll dated as of August 6, 2019 for the remaining properties.

(3) Represents approximately \$262,799 in contractual rent steps through May 2020 and \$32,099 which represents the present value of rent steps for The County of Santa Clara.

(4) Underwritten Economic Vacancy & Credit Loss represents the economic vacancy of 5.0%.

2016 and 2017 cash flows were not provided for the 1277 Terra Bella property because the property was renovated in 2017. Overall, the increase from 2016 Net Operating Income to March 31, 2019 Net Operating Income as well as the increase from March 31, 2019 Net Operating Income to Underwritten Net Operating Income is primarily attributable to recent leasing at the properties. The 1215 Terra Bella property was vacant in 2017 and Elementum executed a lease that commenced in February 2018 accounting for \$972,000 of

(5) Underwritten Base Rent. The 1340 West Middlefield property was vacant in 2018 and Nuro, Inc. executed a lease that commenced in February 2019 accounting for \$911,950 of Underwritten Base Rent. In addition, rent steps were underwritten at \$294,898 (inclusive of contractual rent steps through 2020 and present value rent steps for The County of Santa Clara). Earthquake insurance was also required in the past at the Zappettini Portfolio Properties, however going forward, the borrowers are not required to maintain earthquake insurance, which is why the Underwritten Insurance expense is lower than historical Insurance expense.

(6) Trailing 12 3/19 occupancy is based on underwritten rent roll as of May 21, 2019 for the 850 – 900 North Shore property and August 6, 2019 for the remaining properties.

(7) Metrics are calculated based on the Loan Combination.

- **Appraisal.** According to the appraisal, the Zappettini Portfolio Properties had an aggregate “as-is” appraised value of \$187,400,000 as of May 7, 2019.

Property	Appraisal Approach	Value	Discount Rate	Capitalization Rate
1350 West Middlefield	Direct Capitalization Approach	\$23,000,000	N/A	6.00%
	Discounted Cash Flow Approach ⁽¹⁾	\$22,500,000	8.00%	6.50% ⁽¹⁾
1212 Terra Bella	Direct Capitalization Approach	\$25,900,000	N/A	4.75%
	Discounted Cash Flow Approach ⁽¹⁾	\$26,400,000	8.00%	6.50% ⁽¹⁾
850 - 900 North Shoreline	Direct Capitalization Approach	\$24,400,000	N/A	5.5%
	Discounted Cash Flow Approach ⁽¹⁾	\$24,100,000	8.00%	6.50% ⁽¹⁾
1277 Terra Bella	Direct Capitalization Approach	\$22,200,000	N/A	5.75%
	Discounted Cash Flow Approach ⁽¹⁾	\$21,800,000	7.50%	6.50%
1215 Terra Bella	Direct Capitalization Approach	\$17,700,000	N/A	5.00%
	Discounted Cash Flow Approach ⁽¹⁾	\$17,800,000	8.00%	6.50%
1340 West Middlefield	Direct Capitalization Approach	\$17,400,000	N/A	4.75%
	Discounted Cash Flow Approach ⁽¹⁾	\$17,200,000	8.00%	6.50%
1255 Terra Bella	Direct Capitalization Approach	\$14,300,000	N/A	4.75%
	Discounted Cash Flow Approach ⁽¹⁾	\$14,000,000	7.00%	6.50%
1305 Terra Bella	Direct Capitalization Approach	\$14,000,000	N/A	4.50%
	Discounted Cash Flow Approach ⁽¹⁾	\$14,200,000	8.00%	6.50%
1330 West Middlefield	Direct Capitalization Approach	\$17,200,000	N/A	3.00%
	Discounted Cash Flow Approach ⁽¹⁾	\$17,000,000	8.00%	6.50%
1245 Terra Bella	Direct Capitalization Approach	\$11,800,000	N/A	5.00%
	Yield Capitalization Approach ⁽¹⁾	\$11,500,000	7.50%	6.50% ⁽¹⁾

(1) Represents the terminal cap rate.

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LOAN #3: THE ZAPPETTINI PORTFOLIO

Environmental Matters. The Phase I environmental reports, dated on May 20, 2019, identify as a REC for the following properties their location within a National Priorities List (“NPL”) site groundwater plume: 1212 Terra Bella, 1277 Terra Bella, 1215 Terra Bella, 1340 West Middlefield, 1255 Terra Bella, 1305 Terra Bella, 1330 West Middlefield, and 1245 Terra Bella (collectively, the “Zappettini NPL Properties”). According to the Phase I ESA consultant, groundwater remediation activities have been and are continuing to be performed by the responsible party identified as Thermo Fisher (formerly Spectra Physics). As part of the remediation, soil vapor extraction/mitigation systems have been installed at 1245 Terra Bella and the 1277 Terra Bella properties, and a system has been proposed at the 1255 Terra Bella property. The identified responsible party is also conducting vapor intrusion investigations and monitoring activities at certain

- properties within the area overlying the groundwater plume. While Thermo Fisher remains responsible and liable for investigation and remediation of the groundwater plume underlying the properties, the Regional Water Quality Control Board (“RWQCB”) has recommended that the borrowers share in the cost of the soil vapor mitigation at 1277 Terra Bella due to a low concentration of a Halogenated Volatile Organic Compound identified in the soil in such property, the source of which is unknown and possibly not related to the Thermo Fisher plume. Subject to this cost sharing with respect to the 1277 Terra Bella property, and subject to the continued remediation of the properties by Thermo Fisher (who has been conducting remediation activities at the NPL site, including the Zappettini NPL Properties, since the late 1980s), the Phase I ESA consultant concluded that United States Environmental Protection Agency and the RWQCB are unlikely to seek any enforcement against or require action by the related borrower.

Market Overview and Competition. All 10 properties comprising the Zappettini Portfolio Properties are located in Mountain View, California which is part of the San Jose-Sunnyvale-Santa Clara MSA. According to the appraisal, the local market area is somewhat more heavily weighted toward the manufacturing, services and information sectors and

- the immediate area consists almost entirely of good-quality office and R&D buildings. Land uses in the Zappettini Portfolio Properties’ immediate area consist of a mixture of retail and commercial uses along the major arterials with residential uses located on secondary streets to the south and northeast. According to the appraisal, major employers in the area include, Apple Inc., Alphabet Inc., Stanford University, Cisco Systems Inc. and Kaiser Permanente, to name a few.

The Zappettini Portfolio Properties are located in the western-most portion of Mountain View. The immediate area has access to U.S. Highway 101, which serves most Santa Clara cities, and is located one block north of the Zappettini Portfolio Properties. Additionally, a Santa Clara Valley light rail station, Middlefield Station, is proximate to the Zappettini Portfolio Properties and a bus stop is also located near the light rail station. Additionally, the San Jose Airport is approximately 10 miles and San Francisco International Airport is approximately 25 miles from the Zappettini Portfolio Properties. Notable high-technology firms in the immediate area include: Clontech Laboratories, Google, Microsoft, Omnicell Inc., Symantec and Teledyne Microwave Solutions. According to the appraisal, the Zappettini Portfolio Properties are located in the Mountain View R&D submarket of Silicon Valley. At the end of the first quarter of 2019, the Mountain View R&D submarket contained approximately 10.8 million SF of R&D inventory with 6.9% vacancy and asking rents of \$54.84 per SF. According to a third party report, the population as of January 1, 2019 within a one-, three- and five-mile radius of the Zappettini Portfolio Properties is 23,149, 140,987 and 326,309, respectively, and the average household income within a one-, three- and five-mile radius of the Zappettini Portfolio Properties is \$144,299, \$180,837 and \$190,189, respectively.

The appraiser also identified seven properties that are located within a five-mile radius of the Zappettini Portfolio Properties and are considered to be the competitive set for all of the properties in the portfolio. The seven comparable properties range from 25,000 SF to 114,175 SF and were constructed between 1961 and 1983. The competitive set reported a rental range of \$49.80 per SF to \$58.80 per SF on a triple-net basis. The appraiser concluded that the market rent for the Zappettini Portfolio Properties ranges between \$51.00 per SF to \$58.20 per SF on a triple-net basis. As of the current rent roll, the Zappettini Portfolio Properties have a physical occupancy of 100%.

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The following table presents certain information relating to the primary competition for the Zappettini Portfolio Properties:

Directly Competitive Buildings⁽¹⁾

Property Name	Office Area (NRA)	Year Built	City, State	Vacancy ⁽²⁾	NOI PSF
1212 Terra Bella	37,166	1976	Mountain View, CA	0.00%	\$33.07
1350 West Middlefield Road	29,670	1975	Mountain View, CA	0.00	46.58
1215 Terra Bella	25,000	1974	Mountain View, CA	0.00	35.44
410-430 N. Mary Ave	349,758	1989	Sunnyvale, CA	0.00	42.57
10900 N. Tantau Ave	100,481	2009	Cupertino, CA	0.00	38.81
10201 Torre Ave	88,580	1983	Cupertino, CA	0.00	44.58
590 E. Middlefield Rd	99,880	2012	Mountain View, CA	0.00	37.00
470 Potrero Ave	58,190	1979	Sunnyvale, CA	0.00	37.68
650 Clyde Court	34,606	1977	Mountain View, CA	100.00	N/A

(1) Source: Appraisals.

(2) Vacancy as of August 6, 2019.

The Borrowers. The borrowers are ZIC 1212 Terra Bella LLC, ZIC 1215 Terra Bella LLC, ZIC 1245 Terra Bella LLC, ZIC 1255 Terra Bella LLC, ZIC 1305 Terra Bella LLC, ZIC 1330 W Middlefield LLC, ZIC 1340 W Middlefield LLC, ZIC 1350 W Middlefield LLC, ZCTB 1277 Terra Bella LLC and ZCTB 850 N Shoreline LLC, each a Delaware limited liability company and single purpose entity with at least one independent director. Legal counsel to the borrowers delivered a non-consolidation opinion in connection with the origination of The Zappettini Portfolio Loan Combination. Founded in

- 1921, Zappettini Capital is a private real estate firm that has focused on investing, managing and developing real estate in San Francisco and Silicon Valley for over three generations. The firm has completed over \$600 million in real estate financing and investment transactions since 2008 and has commercial assets spanning over 500,000 SF in investments. John Zappettini serves as the President and CEO of Zappettini Capital, with over 30 years of experience in the corporate finance, private equity and commercial real estate industries and has led or advised on over \$850 million of transactions in the United States and Europe.

Escrows. On the origination date of The Zappettini Portfolio Loan Combination, the borrowers funded reserves of

- (i) \$347,991 for real estate taxes, (ii) \$34,225 for insurance, (iii) \$1,667,365 for tenant improvements and leasing commissions and (iv) \$150,000 for replacement reserves.

On each due date, the borrowers will be required to fund the following reserves with respect to The Zappettini Portfolio Loan Combination: (i) unless the tax reserve waiver conditions under The Zappettini Portfolio Loan Combination documents are satisfied with respect to any individual property (which tax reserve waiver conditions are currently not satisfied for all of the Zappettini Portfolio Properties), one-twelfth of the taxes that the lender estimates will be payable over the next-ensuing 12-month period for each such property (initially estimated at \$57,999 per month for all of the Zappettini Portfolio Properties), (ii) unless the insurance reserve waiver conditions under The Zappettini Portfolio Loan Combination documents are satisfied with respect to any individual property, (which insurance reserve waiver conditions are currently not satisfied for all of the Zappettini Portfolio Properties), one-twelfth of the amount that the lender estimates will be necessary to pay insurance premiums for the renewal of coverage for each such property (initially estimated at \$5,704 per month for all of the Zappettini Portfolio Properties), and (iii) provided that the replacement reserve falls below the cap of \$150,000, an amount equal to \$5,451.

Lockbox and Cash Management. The Zappettini Portfolio Loan Combination documents require a springing lockbox account with springing cash management. After the occurrence of a Zappettini Portfolio Trigger Period (as defined below), the borrowers are required to deliver tenant direction letters to each existing tenant at the Zappettini Portfolio Properties directing each of them to remit their rent payments directly to the lender-controlled lockbox. The borrowers are also required to deliver a tenant direction letter to all future tenants after the occurrence of a Zappettini Portfolio Trigger Period. The borrowers are required to (and are required to cause the property manager to) deposit all revenue derived from the Zappettini Portfolio Properties into the lockbox account. Upon the occurrence and during the continuance of a Zappettini Portfolio Trigger Period, all funds in the lockbox account are required to be swept on each business day to a cash management account under the control of the lender to be applied and disbursed in accordance with The Zappettini Portfolio Loan Combination documents. Upon an event of default under The Zappettini Portfolio Loan Combination documents, the lender may apply funds in such order of priority as it may determine. The borrowers are entitled a one-time right to revert back to a springing lockbox account with springing cash management upon the cure of the first Zappettini Portfolio Trigger Period. Following the second occurrence of a Zappettini Portfolio Trigger Period, the lockbox account and the cash management account remain in place with all

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LOAN #3: THE ZAPPETTINI PORTFOLIO

rents being deposited in the lockbox account and transferred to the cash management account during the existence of a Zappettini Portfolio Trigger Period or otherwise remitted to the borrowers if no Zappettini Portfolio Trigger Period exists.

A “**Zappettini Portfolio Trigger Period**” shall mean a period commencing upon (i) the occurrence and continuance of an event of default under The Zappettini Portfolio Loan Combination documents or (ii) the debt yield falling below 6.00%.

A Zappettini Portfolio Trigger Period caused by the event described in clause (i) above will expire upon the cure (if applicable) of such event of default. In the case of a Zappettini Portfolio Trigger Period caused by the event described in clause (ii) above, such Zappettini Portfolio Trigger Period will expire on the date that the debt yield is equal to or greater than 6.25% for two consecutive calendar quarters.

Property Management. The Zappettini Portfolio Properties are currently managed by Zappettini Capital Terra Bella LLC, an affiliate of the borrower. Under The Zappettini Portfolio Loan Combination documents, the lender has the right to terminate the property management agreement or direct the borrowers to terminate the property management agreement and replace the property manager if (i) the property manager becomes insolvent or a debtor in (x) an involuntary bankruptcy or insolvency proceeding not dismissed within 90 days or (y) any voluntary bankruptcy or insolvency proceeding, (ii) a Zappettini Portfolio Trigger Period exists, (iii) the property manager has engaged in gross negligence, fraud, willful misconduct or misappropriation of funds, or (iv) a default by the property manager under the property management agreement has occurred and is continuing beyond all applicable notice and cure periods. Provided that no event of default has occurred and is continuing under The Zappettini Portfolio Loan Combination documents, the borrowers have the right to replace the property manager with a property manager approved in writing by the lender (which approval may be conditioned on receipt of a rating agency confirmation).

- **Current Mezzanine or Secured Subordinate Indebtedness.** None.
- **Permitted Future Mezzanine or Secured Subordinate Indebtedness.** Not permitted.

Release of Collateral. Provided that no event of default is then continuing under The Zappettini Portfolio Loan Combination, The Zappettini Portfolio Loan Combination documents permit a partial release of one or more of the individual Zappettini Portfolio Properties (A) at any time, if the borrowers are partially prepaying the loan as described below, or (B) at any time after the earlier of (a) May 31, 2022, and (b) the date that is two years after the closing date of the securitization that includes the last note to be securitized, if the borrowers partially defease a portion of The Zappettini Portfolio Loan Combination as described below, in each case, subject to certain conditions, including, without limitation, the following: (i) delivery of the partial defeasance collateral or the prepayment of a portion of The Zappettini Portfolio Loan Combination, in each case, in accordance with The Zappettini Portfolio Loan Combination documents and in an amount equal to 120% of the allocated loan amount for the individual Zappettini Portfolio property to be released, (ii) as of each of the release date and the date of notice of such release, after giving effect to the release, the debt yield for the remaining individual Zappettini Portfolio Properties is greater than the greater of (x) the debt yield for all individual Zappettini Portfolio Properties securing The Zappettini Portfolio Loan Combination immediately prior to the release or the date of such notice, as applicable, and (y) 7.70%, (iii) as of each of the release date and the date of notice of such release, after giving effect to the release, the debt yield for the remaining Zappettini Portfolio Properties (which shall be calculated solely with respect to this clause (iii) by excluding any gross rents on any leases that are scheduled to expire or terminate within 18 months from the consummation of the release) is greater 6.00%, (iv) as of each of the release date and the date of notice of such release, after giving effect to the release, the loan-to-value ratio for the remaining individual Zappettini Portfolio Properties is no greater than the lesser of (a) 64.0%, and (b) the loan-to-value ratio for the individual Zappettini Portfolio Properties securing The Zappettini Portfolio Loan Combination immediately prior to the release date or the date of such notice, as applicable, (v) as of each of the release date and the date of notice of such release, after giving effect to the release, the debt service coverage ratio for the remaining individual Zappettini Portfolio Properties is greater than the greater of (a) 1.80x, and (b) the debt service coverage ratio for the individual Zappettini Portfolio Properties securing The Zappettini Portfolio Loan Combination immediately prior to the release date or the date of such notice, as applicable, (vi) delivery to the lender of a REMIC opinion and (vii) delivery to the lender (in the case of a partial prepayment, if requested by the lender) of a rating agency confirmation.

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LOAN #3: THE ZAPPETTINI PORTFOLIO

Terrorism Insurance. The borrowers are required to maintain an “all-risk” insurance policy without an exclusion of terrorism in an amount equal to the full replacement cost of the Zappettini Portfolio Properties, plus business interruption coverage in an amount equal to 100% of the projected gross income for the applicable property until the completion of restoration or the expiration of 18 months, with a 6-month extended period of indemnity. The “all-risk” policy containing terrorism insurance is required to contain a deductible that is no greater than \$25,000. See *“Risk Factors—Terrorism Insurance May Not Be Available for All Mortgaged Properties”* in the Preliminary Prospectus.

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LOAN #4: MONTALVO SQUARE



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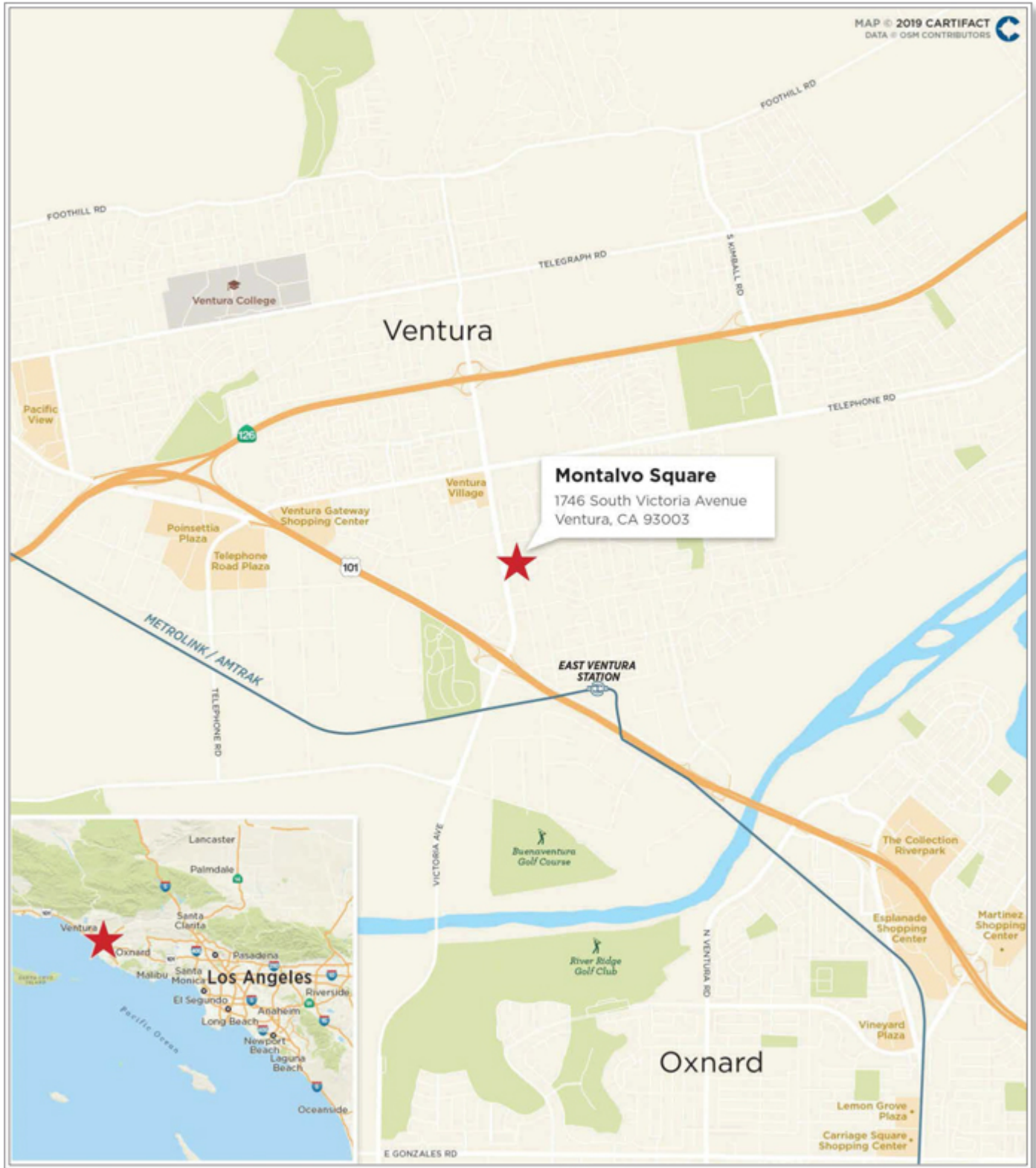
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LOAN #4: MONTALVO SQUARE



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LOAN #4: MONTALVO SQUARE



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LOAN #4: MONTALVO SQUARE

Mortgaged Property Information	
Number of Mortgaged Properties	1
Location (City/State)	Ventura, California
Property Type	Retail
Size (SF)	218,234
Total Occupancy as of 6/1/2019	94.8%
Owned Occupancy as of 6/1/2019	94.8%
Year Built / Latest Renovation	2002-2003 / NAP
Appraised Value	\$85,000,000
Appraisal Date	5/2/2019
Borrower Sponsors	D. John Miller, Lindsay Parton and Dieter Mees
Property Management	DJM Capital Partners, Inc.
Underwritten Revenues	\$6,862,329
Underwritten Expenses	\$1,924,190
Underwritten Net Operating Income (NOI)	\$4,938,139
Underwritten Net Cash Flow (NCF)	\$4,785,375
Cut-off Date LTV Ratio	64.7%
Maturity Date LTV Ratio	64.7%
DSCR Based on Underwritten NOI / NCF	2.29x / 2.22x
Debt Yield Based on Underwritten NOI / NCF	9.0% / 8.7%

Mortgage Loan Information		
Loan Seller	GACC	
Cut-off Date Balance	\$55,000,000	
Cut-off Date Balance per SF	\$252.02	
Percentage of Initial Pool Balance	4.7%	
Number of Related Mortgage Loans	None	
Type of Security	Fee Simple/Leasehold	
Mortgage Rate	3.87000%	
Original Term to Maturity (Months)	120	
Original Amortization Term (Months)	NAP	
Original Interest Only Period (Months)	120	
First Payment Date	8/6/2019	
Maturity Date	7/6/2029	
Escrows⁽¹⁾		
	Upfront	Monthly
Taxes	\$214,109	\$53,527
Insurance	\$0	\$0
Replacement Reserve	\$0	\$3,637
TI/LC	\$0	\$9,093
Other	\$0	\$95,000

Sources and Uses

Sources	\$	%	Uses	\$	%
Loan Amount	\$55,000,000	100.0%	Loan Payoff	\$51,867,954	94.3%
			Principal Equity Distribution	\$2,138,144	3.9
			Closing Costs	779,793	1.4
			Reserves	214,109	0.4
Total Sources	\$55,000,000	100.0%	Total Uses	\$55,000,000	100.0%

(1) See "—Escrows" below.

The Mortgage Loan. The Montalvo Square mortgage loan (the "**Montalvo Square Loan**") is evidenced by a note in the original principal amount of \$55,000,000 and is secured by a first mortgage encumbering the borrower's fee simple and leasehold interest in a 218,234 SF anchored retail shopping center located in Ventura, California (the "**Montalvo Square Property**"). The Montalvo Square Loan was originated by DBNY on July 1, 2019. The Montalvo Square Loan has an outstanding principal balance as of the Cut-off Date of \$55,000,000 and an interest rate of 3.87000% *per annum*. The Montalvo Square Loan represents approximately 4.7% of the Initial Pool Balance. The proceeds of the Montalvo Square Loan were primarily used to refinance the existing debt on the Montalvo Square Property, fund upfront reserves, pay closing costs and return equity to the borrower sponsor.

The Montalvo Square Loan had an initial term of 120 months and has a remaining term of 119 months as of the Cut-off Date. The Montalvo Square Loan requires payments of interest only for the term of the Montalvo Square Loan. The scheduled maturity date of the Montalvo Square Loan is July 6, 2029. Voluntary prepayment of the Montalvo Square Loan is permitted on or after March 6, 2029 without payment of any prepayment premium. Provided no event of default under the Montalvo Square Loan documents is continuing, defeasance of the Montalvo Square Loan with direct, non-callable obligations of the United States of America or other obligations, which are "government securities" permitted under the loan documents is permitted at any time after the earlier of (a) the second anniversary of the securitization closing date and (b) July 1, 2022.

The Mortgaged Property. The Montalvo Square Property is a 218,234 SF anchored retail center located in Ventura, California. The Montalvo Square Property was constructed between 2002 and 2003 on an approximately 20.1 acre site with 891 surface parking spaces, resulting in a parking ratio of approximately 3.9 spaces per 1,000 SF. There is a

- 2.64-acre strip of land along the northern boundary of the Montalvo Square Property which encompasses a portion of the parking area and one outparcel pad building leased to CJ's BBQ. The 2.64 acre parcel which is a portion of the Montalvo Square Property is ground leased from the fee owner, Southern California Edison, for a 30-year term with two, 10-year extension options. The current term expires in 2032 and the fully extended term expires in 2052.

As of June 1, 2019, the Montalvo Square Property was approximately 94.8% occupied by 42 tenants including the grocery anchor Ralph's Grocery Company. The improvements are comprised of three primary anchor/subanchor buildings, two, 2-story mixed-use buildings, which contain office and medical office above ground floor retail, and five, multi-tenant retail outparcel buildings. The tenant mix includes grocery, fitness, food, and community-serving office uses, such as chiropractors, dentists, and urgent care centers. The Montalvo Square Property is anchored by Ralph's Grocery Company ("**Ralph's**") (26.6% of NRA; 22.9% of UW Base Rent; 3.8% Occupancy Cost). Ralph's recently

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LOAN #4: MONTALVO SQUARE

extended its lease an additional ten years in 2019 with a lease expiration date of 2032. Ralph's is a subsidiary of The Kroger Company (rated Baa1/BBB by Moody's/S&P). The Montalvo Square Property's junior anchor tenants are LA Fitness (21.2% of NRA; 17.1% of UW Base Rent) and CVS (10.6% of NRA; 10.9% of UW Base Rent). The five multi-tenant pad buildings are primarily comprised of national, regional, and local businesses and franchisees including Panda Express, Coffee Bean & Tea Leaf, Jimmy John's, Rubio's, and Weight Watchers. Additionally, the Montalvo Square Property has approximately 23,797 SF of second floor office and medical office space. The Montalvo Square Property has maintained a 10-year historical occupancy rate from 2009 – 2018 of 94.5%.

The following table presents certain information relating to the major tenants (of which certain tenants may have co-tenancy provisions) at the Montalvo Square Property:

Ten Largest Owned Tenants Based on Underwritten Base Rent⁽¹⁾

Tenant Name	Credit Rating (Fitch/MIS/S&P) ⁽²⁾	Tenant NRA	% of NRA	UW Base Rent	% of Total UW Base Rent	UW Base Rent \$ per SF	Tenant Sales \$ per SF ⁽³⁾	Occupancy Cost ⁽⁴⁾	Lease Expiration	Renewal / Extension Options
Ralph's Grocery Company	NR / Baa1 / BBB	58,000	26.6%	\$1,229,507	22.9%	\$21.20	\$565	3.8%	6/30/2032	6, 5-year options
LA Fitness	NR / NR / NR	46,300	21.2%	\$914,515	17.1%	\$19.75	NAV	NAV	6/30/2027	2, 5-year options
CVS	NR / Baa2 / BBB	23,112	10.6%	\$584,004	10.9%	\$25.27	\$443	5.7%	2/28/2023	3, 5-year options
AT&T	A- / Baa2 / BBB	4,901	2.2%	\$249,951	4.7%	\$51.00	NAV	NAV	9/30/2023	1, 3-year option
Patrick Diesfeld	NR / NR / NR	6,199	2.8%	\$165,885	3.1%	\$26.76	NAV	NAV	4/30/2020	NAP
El Pollo Loco	NR / NR / NR	2,644	1.2%	\$157,860	2.9%	\$59.70	NAV	NAV	2/28/2022	1, 10-year option
Sola Salons	NR / NR / NR	6,000	2.7%	\$144,000	2.7%	\$24.00	NAV	NAV	11/30/2024	2, 5-year options
The Morgan Law Firm	NR / NR / NR	5,141	2.4%	\$120,993	2.3%	\$23.53	NAV	NAV	1/31/2022	1, 10-year option
Sumo Japanese Restaurant, Inc.	NR / NR / NR	2,929	1.3%	\$119,503	2.2%	\$40.80	\$1,307	3.1%	7/31/2022	1, 5-year option
Rubio's	NR / NR / NR	2,201	1.0%	\$109,651	2.0%	\$49.82	\$451	11.1%	10/31/2027	NAP
Ten Largest Owned Tenants		157,427	72.1%	\$3,795,869	70.8%	\$24.11				
Remaining Tenants		49,359	22.6%	1,563,063	29.2%	\$31.67				
Vacant		11,448	5.2%	0	0.0%	\$0.00				
Total / Wtd. Avg. All Tenants		218,234	100.0%	\$5,358,932	100.0%	\$25.92				

(1) Based on the underwritten rent roll dated June 1, 2019.

(2) Certain ratings are those of the parent company whether or not the parent guarantees the lease.

(3) Tenant Sales \$ per SF were provided by the borrower and reflect year-end sales for 2018.

(4) Occupancy Cost is based on UW Base Rent.

The following table presents certain information relating to the lease rollover schedule at the Montalvo Square Property, based on initial lease expiration dates:

Lease Expiration Schedule⁽¹⁾⁽²⁾

<u>Year Ending December 31</u>	<u>Expiring Owned GLA</u>	<u>% of Owned GLA</u>	<u>Cumulative % of Owned GLA</u>	<u>UW Base Rent</u>	<u>% of Total UW Base Rent</u>	<u>UW Base Rent \$ per SF</u>	<u># of Expiring Tenants</u>
MTM	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2019	1,855	0.9	0.9%	37,131	0.7	\$20.02	2
2020	14,580	6.7	7.5%	377,920	7.1	\$25.92	7
2021	7,755	3.6	11.1%	186,465	3.5	\$24.04	5
2022	20,020	9.2	20.3%	738,464	13.8	\$36.89	9
2023	38,028	17.4	37.7%	1,167,876	21.8	\$30.71	8
2024	8,747	4.0	41.7%	225,717	4.2	\$25.81	3
2025	2,500	1.1	42.8%	52,500	1.0	\$21.00	1
2026	1,200	0.5	43.4%	46,800	0.9	\$39.00	1
2027	52,301	24.0	67.4%	1,206,696	22.5	\$23.07	4
2028	0	0.0	67.4%	0	0.0	\$0.00	0
2029	1,800	0.8	68.2%	89,856	1.7	\$49.92	1
2030 & Thereafter	58,000	26.6	94.8%	1,229,507	22.9	\$21.20	1
Vacant	11,448	5.2	100.0%	NAP	NAP	NAP	NAP
Total / Wtd. Avg.	218,234	100.0%		\$5,358,932	100.0%	\$25.92	42

- (1) Certain tenants may have lease termination options that are exercisable prior to the originally stated expiration date of the subject lease and that are not considered in the Lease Expiration Schedule.
- (2) Based on the underwritten rent roll dated June 1, 2019.

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LOAN #4: MONTALVO SQUARE

The following table presents certain information relating to historical leasing at the Montalvo Square Property:

Historical Leased %⁽¹⁾

	2016	2017	2018	As of 6/1/2019 ⁽²⁾
Owned Space	96.6%	97.0%	96.6%	94.8%

(1) As provided by the borrower and which represents occupancy as of December 31 for the indicated year unless otherwise specified.

(2) Based on underwritten rent roll dated June 1, 2019.

- Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the Montalvo Square Property:

Cash Flow Analysis⁽¹⁾

	2016	2017	2018	TTM 3/31/2018	Underwritten	Underwritten \$ per SF
Base Rent	\$5,175,147	\$5,260,893	\$5,510,846	\$5,415,080	\$5,358,932	\$24.56
Rent Steps ⁽²⁾	0	0	0	0	\$57,362	0.26
Gross Up Vacancy	0	0	0	0	490,690	2.25
Reimbursements	1,175,460	1,272,057	1,200,650	1,173,761	1,302,536	5.97
Other Income	16,279	11,093	14,402	15,484	13,889	0.06
Vacancy & Credit Loss ⁽³⁾	0	0	0	0	(361,081)	(1.65)
Effective Gross Income	\$6,366,886	\$6,544,043	\$6,725,899	\$6,604,325	\$6,862,329	\$31.44
Real Estate Taxes	\$568,552	\$627,665	\$638,838	\$644,623	\$651,265	\$2.98
Insurance	18,207	25,200	29,791	29,791	46,801	0.21
Ground Rent	95,000	95,000	79,167	95,000	108,585	0.50
Management Fee	222,047	231,110	232,719	278,214	240,605	1.10
Other Operating Expenses	909,577	895,437	906,753	858,950	876,934	4.02
Total Operating Expenses	\$1,813,383	\$1,874,412	\$1,887,267	\$1,906,579	1,924,190	\$8.82
Net Operating Income	\$4,553,502	\$4,669,631	\$4,838,632	\$4,697,746	\$4,938,139	\$22.63
TI/LC	0	0	0	0	109,117	0.50
Capital Expenditures	0	0	0	0	43,647	0.20
Net Cash Flow	\$4,553,502	\$4,669,631	\$4,838,632	\$4,697,746	\$4,785,375	\$21.93
Occupancy⁽⁴⁾	96.6%	97.0%	96.6%	94.8%	95.0%	
NOI Debt Yield	8.3%	8.5%	8.8%	8.5%	9.00%	
NCF DSCR⁽⁵⁾	2.11x	2.16x	2.24x	2.18x	2.22x	

Certain items such as straight line rent, interest expense, interest income, lease cancellation income, depreciation, amortization, debt service

- payments and any other non-recurring or non-operating items were excluded from the historical presentation and are not considered for the underwritten cash flow.
- Underwritten Rent Steps includes \$13,718 of straight line rent for Ralph's over the lease term and contractual rent steps of \$43,644 through June 1, 2020.
- Represents an underwritten economic vacancy of 5.0%.
- TTM Occupancy is as of June 1, 2019.
- Based on the interest only debt service payments of the Montalvo Square Loan.

- Appraisal.** According to the appraisal, the Montalvo Square Property had an "as-is" appraised value of \$85,000,000 as of May 2, 2019.

Appraisal Approach	"As-Is" Value	Discount Rate	Capitalization Rate
Direct Capitalization Approach	\$86,100,000	N/A	5.50%
Discounted Cash Flow Approach	\$83,800,000	6.75%	6.00% ⁽¹⁾

(1) Represents the terminal capitalization rate.

- **Environmental Matters.** According to a Phase I environmental report, dated May 14, 2019, the environmental consultant did not identify evidence of any recognized environmental conditions

- **Market Overview and Competition.** The Montalvo Square Property is located in Ventura, Ventura County, California, which is approximately 68 miles northwest of Los Angeles. The Montalvo Square Property has good local and regional access located along the east side of South Victoria Avenue. Victoria Avenue is a major north/south thoroughfare in the area. Regional access is provided by the Ventura Freeway (Highway 101), which is located approximately one-half mile east. Regional access is also provided by the Santa Paula Freeway (Highway 126), located approximately one mile north.

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LOAN #4: MONTALVO SQUARE

Downtown Ventura is a creative and lively area that features unique architecture and a mix of retail shops, restaurants and service businesses. The area also exhibits numerous historic homes, museums, boutiques, Mission San Buenaventura, antique shops and restaurants. Downtown Ventura is the largest shopping area in the county with over 400 shops & restaurants, primarily within walking distance of each other. The 2018 estimated population within a one-, three- and five-mile radius of the Montalvo Square Property is approximately 21,175, 99,955 and 217,188, respectively. Median household income within a one-, three- and five-mile radius is \$70,114, \$79,212 and \$74,265, respectively.

According to the appraisal, the Montalvo Square Property is located in the Ventura County retail submarket. As of the first quarter of 2019, the Ventura County submarket contained a total of approximately 7.4 million SF. Over the same period, the Ventura County submarket had a vacancy rate of 2.5% and had asking rents of \$22.00 per SF.

The following table presents certain information relating to the primary competition for the Montalvo Square Property:

Competitive Set⁽¹⁾

<u>Property Name</u>	<u>Address</u>	<u>City, State</u>	<u>Occupancy</u>
Montalvo Square	1746 South Victoria Avenue	Ventura, CA	94.8%⁽²⁾
Ventura Shopping Center	1717-1783 South Victoria Avenue	Ventura, CA	100.0%
Victoria Village	NWC South Victoria Avenue & Ralson Street	Ventura, CA	97.7%
Ventura Village	SWC Telephone Road & South Victoria Avenue	Ventura, CA	89.7%
Ventura Gateway	SWC Telephone Road & Portola Road	Ventura, CA	98.6%
Telephone Plaza	NWC Telephone Road & Westinghouse Street	Ventura, CA	92.6%
Poinsettia Plaza	SWC Telephone Road & East Main Street	Ventura, CA	94.6%
Donlon Plaza	SEC East Main Street & Callens Road	Ventura, CA	97.0%
The Plaza	SEC East Thompson Blvd & South Borchard Drive	Ventura, CA	100.0%

(1) Source: Appraisal.

(2) Based on the underwritten rent roll dated June 1, 2019.

■ **The Borrower.** The borrower is Montalvo Square Associates, LLC, a recycled single-purpose, single-asset entity with two independent directors. Legal counsel to the borrower delivered a non-consolidation opinion in connection with the origination of the Montalvo Square Loan. The non-recourse carve-out guarantors and borrower sponsors of the Montalvo Square Loan are D. John Miller, Lindsay Parton and Dieter Mees.

D. John Miller founded DJM Capital, which provides private equity investment, development and asset management services within the real estate sector with a core strength in retail combined with expertise in office, industrial and residential product types. DJM Capital has approximately 2.8 million SF of retail managed and owned and over \$1.3 billion in assets under management.

■ **Escrows.** On the origination date of the Montalvo Square Loan, the borrower funded escrow reserves of \$214,109 for real estate taxes.

On each due date, the borrower is required to fund the following reserves with respect to the Montalvo Square Loan: (i) a tax reserve in an amount equal to one-twelfth of the amount that the lender estimates will be necessary to pay taxes over the then succeeding 12-month period (initially estimated to be \$53,527 per month), (ii) a replacement reserve in an amount equal to \$3,637, (iii) a tenant improvements and leasing commission reserve in an amount equal to (a) \$9,093, so long as the occupancy at the Montalvo Square Property is equal to or great than 90.0% and (b) \$18,186, if the occupancy at the Montalvo Square Property is less than 90.0%, subject to a cap of \$654,702, and (iv) a ground rent reserve in an amount equal to any rent, additional rent or other charge payable by the tenant under the ground lease (currently equates to \$95,000).

Insurance escrows are waived so long as the Montalvo Square Property is covered by an acceptable blanket policy (which is currently maintained). If such condition is no longer satisfied, on each payment date, the Montalvo Square

borrower will be required to fund an insurance reserve in an amount equal to one-twelfth of the amount that the lender estimates will be necessary to pay the annual insurance premiums.

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LOAN #4: MONTALVO SQUARE

Lockbox and Cash Management. The Montalvo Square Loan is structured with a hard lockbox and springing cash management. At origination, the borrower is required under the Montalvo Square Loan documents to send tenant direction letters to all tenants of the Montalvo Square Property instructing them to deposit all rents and other payments into the lockbox account controlled by the lender, and any funds received by the borrower or the property manager are required to be deposited within one business day in the lockbox account. During a Trigger Period (as defined below),

- all funds in the lockbox account are required to be transferred on each business day into a cash management account established for the sole and exclusive benefit of the lender, and applied to all required payments and reserves as set forth in the Montalvo Square Loan documents. Provided that no Trigger Period is continuing, all funds in the lockbox account are required to be transferred on each business day to the borrower's operating account. Upon the occurrence of an event of default under the Montalvo Square Loan documents, funds in the cash management account may be applied in such order of priority as the lender may determine.

A "**Trigger Period**" means a period commencing upon the occurrence of (i) an event of default under the Montalvo Square Loan documents, (ii) a Lease Sweep Period (as defined below) or (iii) the debt service coverage ratio being less than 1.15x based on a 30-year amortization period ("**DSCR Trigger Period**"). A Trigger Period will be cured upon (a) in connection with clause (i) above, the cure, if applicable, of such event of default, (b) in connection with clause (ii) above, such Lease Sweep Period has ended and (c) in connection with clause (iii) above, the debt service coverage ratio being equal to or greater than 1.20x for two consecutive calendar quarters.

A "**Lease Sweep Period**" will commence (a) with respect to each Lease Sweep Lease (as defined below) upon the earlier of (i) six months prior to the earliest expiration of a Lease Sweep Lease or (ii) upon the date required under the Lease Sweep Lease by which the Lease Sweep Tenant (as defined below) is required to give notice of its exercise of a renewal option thereunder (and such renewal has not been so exercised); (b) upon the early termination, early cancellation or early surrender of a Lease Sweep Lease or upon the borrower's receipt of notice by a Lease Sweep Tenant of its intent to effect an early termination, early cancellation or early surrender of its Lease Sweep Lease; (c) if a Lease Sweep Tenant has ceased operating its business (i.e., "goes dark") at substantially all of its space at the Montalvo Square Property; (d) upon a default under a Lease Sweep Lease by a Lease Sweep Tenant beyond any applicable notice and cure period, or (e) upon a bankruptcy or insolvency proceeding of a Lease Sweep Tenant or its parent.

A Lease Sweep Period will end once the applicable event that triggered such Lease Sweep Period has been cured or the space demised under the Lease Sweep Lease has been re-tenanted pursuant to one or more "Qualified Leases" as defined in the Montalvo Square loan documents (or, if applicable, the applicable Lease Sweep Lease has been renewed pursuant to its terms) and, in the lender's reasonable judgment, sufficient funds have been accumulated in the Lease Sweep reserve to cover all anticipated tenant improvements and leasing commissions and free and/or abated rent in connection therewith (and any operating shortfalls relating to the delay in the commencement of full rent payments). A Lease Sweep Period shall also cease on the date on which \$25.00 per square foot with respect to the portion of the space demised under the applicable Lease Sweep Lease that has accumulated in the Lease Sweep reserve account (unless the applicable space has been re-tenanted and the leasing costs will actually exceed \$25.00 per square foot, in which case the amount necessary to re-tenant must be on deposit).

A "**Lease Sweep Lease**" means (i) the Ralph's lease, (ii) the LA Fitness lease or (iii) any replacement lease that, either individually, or when taken together with any other lease with the same tenant or its affiliates, covers the majority of the applicable Lease Sweep Lease space.

A "**Lease Sweep Tenant**" means any tenant under a Lease Sweep Lease.

Property Management. The Montalvo Square Property is currently managed by DJM Capital Partners, Inc., an affiliate of the borrower, pursuant to a management agreement. Under the Montalvo Square Loan documents, the lender has the right, and has the right to direct the borrower, to terminate the property management agreement and replace the property manager:

- (i) at any time following the occurrence of an event of default, (ii) if the property manager is in material default under the management agreement beyond any applicable notice and cure period, (iii) if the property manager shall become insolvent or a debtor in any bankruptcy or insolvency proceeding, or (iv) if at any time the property manager has engaged in gross negligence, fraud, willful misconduct or misappropriation of funds.

- **Current Mezzanine or Subordinate Indebtedness.** None.
- **Permitted Future Mezzanine or Secured Subordinate Indebtedness.** Not permitted.

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LOAN #4: MONTALVO SQUARE

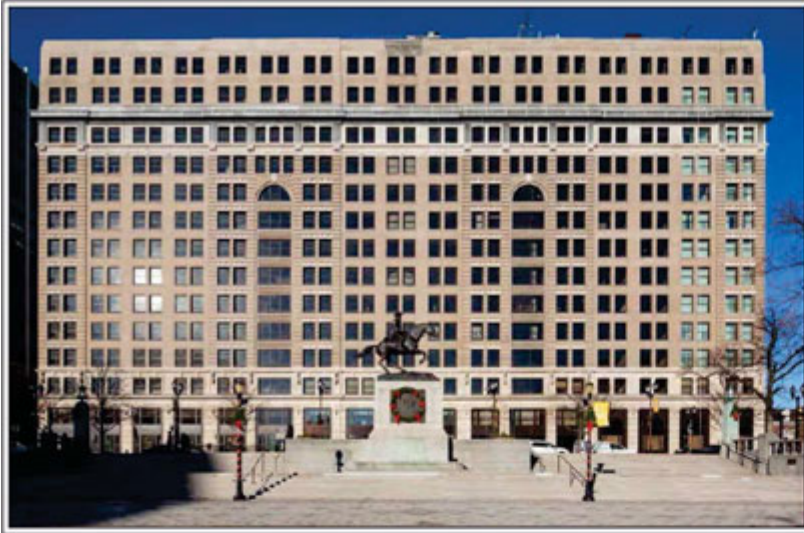
- **Release of Collateral.** Not permitted.

Terrorism Insurance. The borrower is required to maintain an “all-risk” insurance policy that provides coverage for terrorism in an amount equal to the full replacement cost of the Montalvo Square Property, plus business interruption coverage in an amount equal to 100% of the projected gross income from the Montalvo Square Property until the completion of restoration or the expiration of 18 months. The terrorism insurance is required to contain a deductible that is acceptable to the lender and is no greater than \$25,000. In the event TRIPRA is no longer in effect, terrorism insurance coverage will be subject to a cap equal to an amount equal to two times the amount of the insurance premium that is payable in respect of the property and business interruption/rental loss insurance required under the loan documents (without giving effect to the cost of terrorism and earthquake components of such property and business interruption/rental loss insurance) at the time that such terrorism coverage is excluded from the applicable. See “*Risk Factors—Terrorism Insurance May Not Be Available for All Mortgaged Properties*” in the Preliminary Prospectus.

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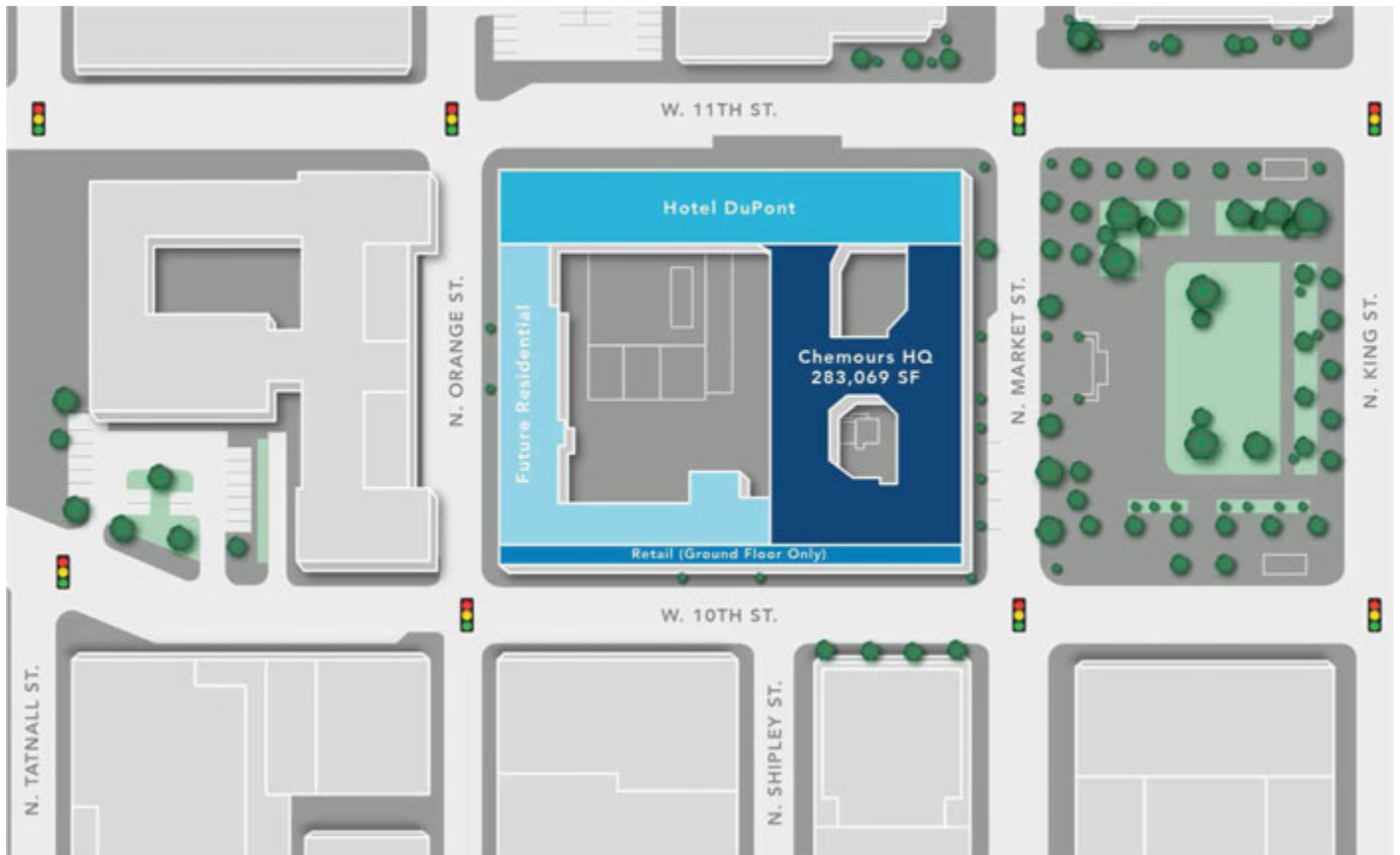
LOAN #5: CHEMOURS HQ



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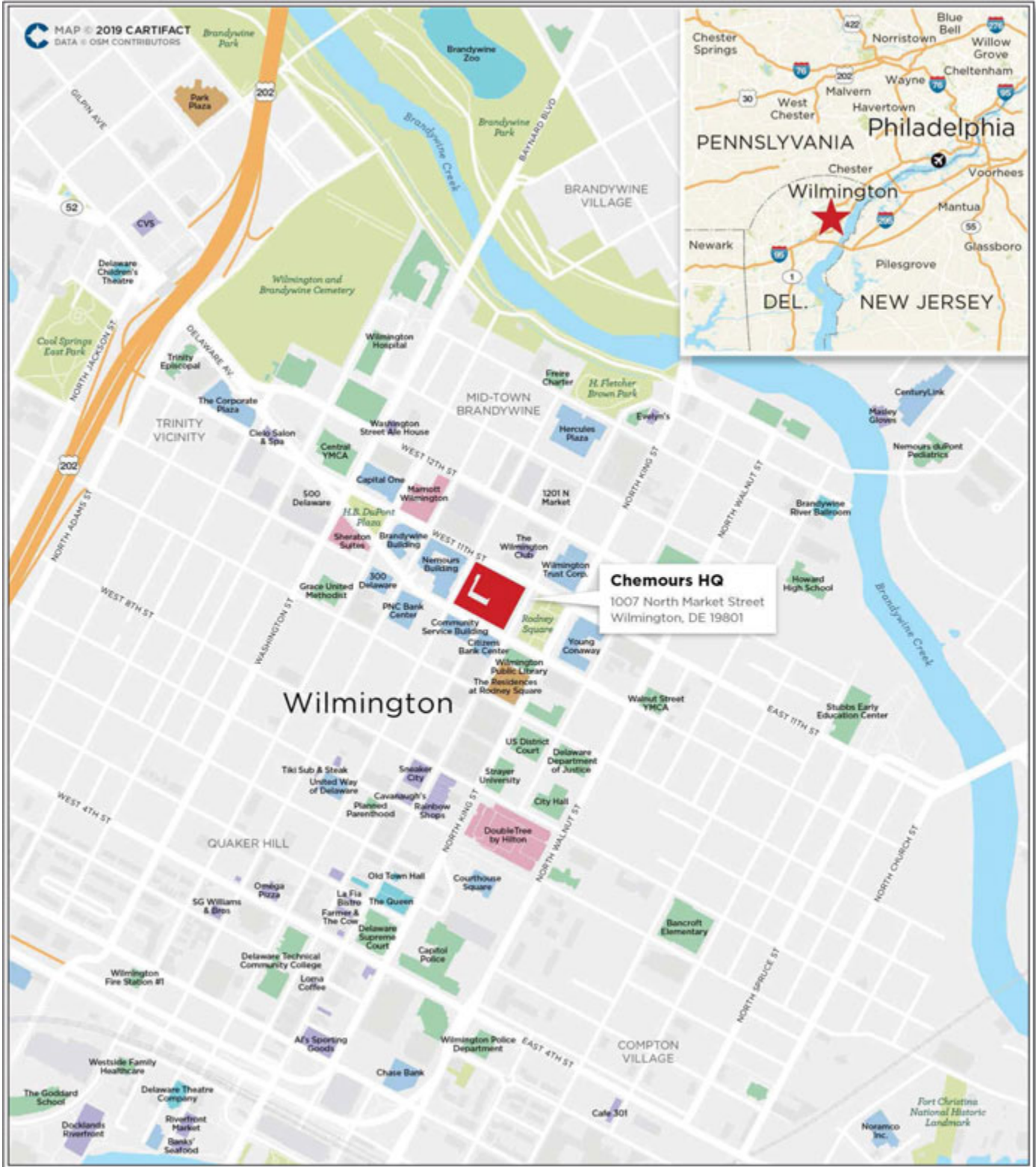
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LOAN #5: CHEMOURS HQ



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is continuing under the Chemours HQ Loan documents, at any time after the second anniversary of the securitization closing date, the Chemours HQ Loan may be defeased with certain “government securities” as permitted under the Chemours HQ Loan documents. Voluntary prepayment of the Chemours HQ Loan is permitted after the due date occurring in May 2024 without payment of any prepayment premium.

The Mortgaged Property. The Chemours HQ Property is an 11-story, 283,069 SF condominium interest located within the approximately 969,000 SF Chemours Building (f/k/a the DuPont Building) that includes office space on floors 2 to 13, ground-floor retail space, the 217-room four-star Hotel DuPont and a theater currently occupied by the Grand Opera House of Delaware. The Chemours Building encompasses an entire city block bound by 10th, 11th, Market and Orange Streets in Wilmington, Delaware and is located approximately 15.0 miles southwest of the Philadelphia International Airport and approximately 21.0 miles southwest of the Philadelphia CBD. The Chemours Building was built in phases from 1913 through approximately 1970 by the DuPont Company and is listed on the National Register of Historic Places. In mid-2015, the DuPont Company spun off the Chemours unit, and the Chemours HQ Property was transferred to Chemours since it occupied all of the office space in the Chemours Building. Chemours has been an office tenant at the Chemours HQ Property since prior to the Chemours spin off from DuPont Company. The Chemours HQ Property serves as the corporate headquarters for Chemours and is leased

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LOAN #5: CHEMOURS HQ

through December 2033 with \$0.50 per SF annual rent increases, two consecutive 10-year extension options at fair market value and no termination options other than customary rights following a casualty or condemnation.

The remainder of the Chemours Building was sold to two related entities of the Buccini Pollin Group (“BPG”) in early 2017 for \$32.0 million. After acquiring the property, BPG began an approximately \$175.0 million renovation of the Chemours Building. The renovation focused on creating the Chemours headquarters environment, which included significant base building, mechanical system replacements and upgrades. Upgrades to the Chemours Building included a complete refresh of the Hotel DuPont lobby, the addition of a 13,000 SF food hall, new interior ground floor common corridors, as well as a new entrance and lobby off of 10th Street. The last major proposed part of the renovation is the creation of 155 luxury apartments in the remaining portion of the Chemours Building. Of the approximately \$175.0 million invested in the entire Chemours Building, approximately \$32.3 million of base building work was allocated to the Chemours HQ Property. In addition to an approximately \$16.2 million tenant improvement allowance, Chemours has contributed approximately \$37.8 million (\$133.54 PSF) to its space.

As of August 1, 2019, the Chemours HQ Property is 100.0% occupied and triple-net leased to Chemours (rated BB by S&P and Ba3 by Moody’s) under two leases, each with a term through December 2033. Chemours is a Fortune 500 Company and a global leader in the research and manufacturing of performance chemicals, operating through three segments: Titanium Technologies, Fluoroproducts and Chemical Solutions. The Titanium Technologies segment is a producer of titanium dioxide, the Fluoroproducts segment is a provider of fluoroproducts, including refrigerants and industrial fluoropolymer resins and the Chemical Solutions segment is a North American provider of industrial chemicals used in gold production, oil and gas, water treatment and other industries. As of December 31, 2018, Chemours operated 58 manufacturing facilities, laboratory sites and offices, employing approximately 7,000 people worldwide and serving customers in approximately 120 countries. Financial year 2018 global sales were over \$6.6 billion and adjusted EBITDA was approximately \$1.7 billion. Chemours is the parent company and guarantor of the lease.

The following table presents certain information relating to the tenant at the Chemours HQ Property:

Largest Owned Tenant Based on Underwritten Base Rent⁽¹⁾

Tenant Name	Credit Rating (Fitch/MIS/ S&P) ⁽²⁾	Tenant GLA	% of Owned GLA	UW Base Rent ⁽³⁾	% of Total UW Base Rent	UW Base Rent \$ per SF ⁽³⁾	Lease Expiration	Renewal / Extension Options
Chemours	NR / Ba3 / BB	283,069	100.0%	\$5,986,909	100.0%	\$21.15	12/31/2033	2, 10-year options
All Tenants		283,069	100.0%	\$5,986,909	100.0%	\$21.15		
Vacant		0	0.0	0	0.0	0.00		
Total / All Owned Tenants		283,069	100.0%	\$5,986,909	100.0%	\$21.15		

(1) Based on the underwritten rent roll.

(2) Certain ratings are those of the parent company whether or not the parent guarantees the lease.

(3) UW Base Rent and UW Base Rent \$ per SF includes rent steps occurring through May 2020 (current contractual rent is \$20.65 per SF).

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LOAN #5: CHEMOURS HQ

The following table presents certain information relating to the lease rollover schedule at the Chemours HQ Property, based on initial lease expiration dates:

Lease Expiration Schedule⁽¹⁾

Year Ending December 31	Expiring Owned GLA	% of Owned GLA	Cumulative % of Owned GLA	UW Base Rent ⁽²⁾	% of Total UW Base Rent	UW Base Rent \$ per SF ⁽²⁾	# of Expiring Tenants
MTM	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2019	0	0.0	0.0%	0	0.0	\$0.00	0
2020	0	0.0	0.0%	0	0.0	\$0.00	0
2021	0	0.0	0.0%	0	0.0	\$0.00	0
2022	0	0.0	0.0%	0	0.0	\$0.00	0
2023	0	0.0	0.0%	0	0.0	\$0.00	0
2024	0	0.0	0.0%	0	0.0	\$0.00	0
2025	0	0.0	0.0%	0	0.0	\$0.00	0
2026	0	0.0	0.0%	0	0.0	\$0.00	0
2027	0	0.0	0.0%	0	0.0	\$0.00	0
2028	0	0.0	0.0%	0	0.0	\$0.00	0
2029	0	0.0	0.0%	0	0.0	\$0.00	0
2030 & Thereafter	283,069	100.0	100.0%	5,986,909	100.0	\$21.15	1
Vacant	0	0.0	100.0%	NAP	NAP	NAP	NAP
Total	283,069	100.0%		\$5,986,909	100.0%	\$21.15	1

(1) Based on the underwritten rent roll.

(2) UW Base Rent and UW Base Rent \$ per SF includes rent steps occurring through May 2020 (current contractual rent is \$20.65 per SF).

The following table presents certain information relating to historical leasing at the Chemours HQ Property:

Historical Leased⁽¹⁾

	2018	As of 8/1/2019 ⁽²⁾
Owned Space	100.0%	100.0%

(1) As provided by the borrower and which represents leased occupancy as of December 31 for the indicated year unless otherwise specified.

(2) Based on the underwritten rent roll.

■ **Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the Chemours HQ Property:

Cash Flow Analysis⁽¹⁾⁽²⁾

	Underwritten	Underwritten \$ per SF
Base Rent ⁽³⁾	\$5,986,909	\$21.15
Vacant Income	0	0.00
Total Reimbursement Revenue	2,768,189	9.78
Gross Revenue	\$8,755,098	\$30.93
Vacancy & Credit Loss	(218,877)	(0.77)
Concessions	0	0.00
Effective Gross Income	\$8,536,221	\$30.16

Real Estate Taxes	\$354,008	1.25
Insurance	75,000	0.26
Management Fee	256,087	0.90
Other Operating Expenses	2,174,181	7.68
Total Operating Expenses	\$2,859,276	\$10.10
Net Operating Income	\$5,676,945	\$20.05
TI/LC, Capex/RR	198,148	0.70
Net Cash Flow	\$5,478,797	\$19.35
Occupancy	100.0%	
NOI Debt Yield⁽⁴⁾	11.3%	
NCF DSCR⁽⁴⁾	2.71x	

- Certain items such as straight line rent, interest expense, interest income, lease cancellation income, depreciation, amortization, debt service payments and any other non-recurring or non-operating items were excluded from the historical presentation and are not considered for the underwritten cash flow.
- (2) Limited historical financial information was provided when the sponsor acquired the Chemours HQ Property in connection with loan closing.
 - (3) Underwritten Base Rent includes rent steps occurring through May 2020 (current contractual rent is \$20.65 per SF).
 - (4) Debt service coverage ratios and debt yields are based on the Chemours HQ Loan.

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LOAN #5: CHEMOURS HQ

- **Appraisal.** According to the appraisal, the Chemours HQ Property had an “as-is” appraised value of \$84,000,000 as of May 2, 2019. The appraiser also concluded a “hypothetical market value assuming vacant” appraised value of \$46,350,000 as of May 2, 2019, equating to a Cut-off Date LTV Ratio and a Maturity Date LTV Ratio of 108.7%.

<u>Appraisal Approach</u>	<u>Value</u>	<u>Discount Rate</u>	<u>Capitalization Rate</u>
Income Capitalization Approach	\$84,000,000	8.50%	7.50% ⁽¹⁾

(1) Represents the terminal capitalization rate.

- **Environmental Matters.** The Phase I environmental report dated May 14, 2019 did not identify any evidence of recognized environmental conditions at the Chemours HQ Property.

- **Market Overview and Competition.** The Chemours HQ Property encompasses an entire city block bound by 10th, 11th, Market and Orange Streets within the Wilmington CBD and is located approximately 15.0 miles southwest and approximately 21.0 miles southwest of the Philadelphia International Airport and the Philadelphia CBD, respectively. The Chemours HQ Property is accessible by a network of interstate highways including I-95, I-495 and I-295, as well as U.S. Route 13. Amtrak and SEPTA commuter rail stations are situated approximately 0.6 miles south of the Chemours HQ Property with 55 daily trains from the Wilmington Station.

The Chemours HQ Property is located directly west of Rodney Square, which is considered the center of the Wilmington CBD. The immediate area surrounding the Chemours HQ Property consists of office uses or office amenities and includes numerous retailers including Rite Aid, Walgreens, Qdoba Mexican Grill as well as other small shops and restaurants. Since 1996, Wilmington’s Riverfront District has been the focus of a more than \$1.0 billion joint venture redevelopment effort by the City of Wilmington and several private real estate developers opening restaurants, shops, corporate headquarters and a regional conference facility. The Penn Cinema Riverfront & IMAX complex, which opened in December 2012, is estimated to bring an additional 700,000 visitors to the Riverfront District annually. Recent investments in the Wilmington CBD include the approximately \$210 million, 337,000 SF expansion of Christiana Care’s Wilmington Hospital completed in 2014 and the approximately \$260 million, five-story, 425,000 SF expansion of the Nemours/Alfred I. DuPont Hospital for Children.

According to the appraisal, the Chemours HQ Property is located in the Wilmington CBD office submarket within the greater Northern Delaware office market. According to the appraisal, as of the fourth quarter of 2018, the Wilmington CBD office submarket, was comprised of approximately 7.5 million SF with an overall vacancy rate of 15.3% and average rents of approximately \$26.53 per SF. The appraisal identified seven comparable office leases in the Northern Delaware market signed between May 2017 and February 2020 and ranging in size from approximately 12,052 SF to 279,000 SF. Initial base rents for comparable office leases ranged from \$21.25 to \$35.50 per SF, with a weighted average of approximately \$30.89 per SF. The underwritten base rent for the Chemours HQ Property, based on the straight-line average over the remaining loan term, is \$21.15 per SF, in-line with the appraisal’s concluded market rent of \$21.00 per SF.

- **The Borrower.** The borrowing entity for the Chemours HQ Loan is North Market Property Corp., a Delaware corporation and a single-purpose entity structured to be bankruptcy remote with two independent directors. There is no separate non-recourse carveout guarantor, and the borrower is the sole party responsible for any breaches or violations of the non-recourse carveout provisions or the environmental indemnity.

The borrower sponsor of the Chemours HQ Loan is Arch Street Capital Advisors (“**Arch Street**”). Arch Street is a full service real estate investment and advisory firm founded in 2003 that specializes in advising investors on its U.S. real estate strategies. Arch Street provides a range of services including acquisition, asset management, joint ventures and restructuring and workouts. Arch Street has over 15 years of experience and has advised clients on more than \$7.4 billion of transactions totaling approximately 12.4 million square feet spanning the following sectors: multifamily, office, retail, industrial, hospitality, student housing, seniors housing, condo development, land entitlement and single family housing.

- **Escrows.** At loan origination, the borrower deposited approximately \$2,018,882 into a PNC distributions reserve, \$1,000,000 into a replacement reserve, approximately \$922,359 into a free rent reserve, approximately \$621,401 into a reserve for the HTC put obligations reserve, \$600,000 into a reserve for a permitted PACE loan reserve and \$12,190 for insurance.

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LOAN #5: CHEMOURS HQ

On each due date, the borrower is required to fund the following reserves with respect to the Chemours HQ Loan: (i) a tax reserve in an amount equal to one-twelfth of the amount that the lender estimates will be necessary to pay taxes over the then succeeding 12-month period (initially estimated to be \$30,942.08 per month), (ii) a replacement reserve in an amount equal to \$2,358.91 (subject to a cap of approximately \$56,614 excluding any amounts remaining from the upfront replacement reserve deposit) and (iii) during the continuance of a Cash Sweep Event (as defined below), a tenant improvements and leasing commission reserve in an amount equal to \$30,665.81. The Chemours HQ Loan documents require monthly deposits into the insurance reserve account in the amount of one-twelfth of the annual insurance premiums (a) upon an event of default or (b) if an acceptable blanket insurance policy is not in place (initially estimated to be \$2,742.73 per month).

Lockbox and Cash Management. The Chemours HQ Loan is structured with a hard lockbox and springing cash management. The borrower was required at loan origination to send a tenant direction letter to the sole tenant at the Chemours HQ Property, instructing it to deposit all rents and payments into a lender controlled lockbox account. To the extent no Cash Sweep Event is continuing, all funds in the lockbox account are required to be transferred to or at the direction of the borrower. Following the occurrence and during the continuance of a Cash Sweep Event, all funds in the lockbox account are required to be swept each business day to a segregated cash management account under the control of the lender and disbursed in accordance with the Chemours HQ Loan documents. To the extent there is a Cash Sweep Event continuing, all excess cash flow after payment of debt service, required reserves and operating expenses is required to be held as additional collateral for the Chemours HQ Loan, provided (i) if the Cash Sweep Event is solely caused by a Tenant Downgrade Trigger Event (as defined below) and Tenant Downgrade Trigger Event is caused by the rating of the long-term unsecured debt obligations of Chemours being downgraded by S&P or Fitch from its rating at closing to B+ (but no lower) or downgraded by Moody's from its rating at closing to B1 (but no lower), the cash sweep shall be capped at \$9,907,415 and (ii) provided no Event of Default has occurred and is continuing, upon request by borrower, lender shall disburse excess cash flow reserve up to an aggregate maximum amount of \$150,000 *per annum* to the borrower to pay for operating expense short falls. The lender has been granted a first priority security interest in the cash management account.

A “**Cash Sweep Event**” means the occurrence of (i) an event of default, (ii) any bankruptcy of the borrower, Sponsor Master Lessee, HTC master lessee, managing member of HTC master lessee; pledgor or property manager, (iii) a DSCR Trigger Event (as defined below), (iv) a Tenant Trigger Event (as defined below) and (v) a Tenant Downgrade Trigger Event.

A “**Cash Sweep Event Cure**” means (a) with respect to clause (i) above, the acceptance by the lender of a cure of such event of default (which may not be unreasonably withheld, conditioned or delayed unless the lender has accelerated the Chemours HQ Loan, commenced foreclosure proceedings or initiated any other remedy), (b) with respect to clause (ii) above solely with respect to the bankruptcy of the property manager, (A) such involuntary petition is dismissed within 60 days of filing or (B) borrower replaces the manager with a manager qualified in the lender's discretion within 60 days of such Cash Sweep Event, (c) with respect to a DSCR Trigger Event, a DSCR Cure Event (as defined below) has taken place, (d) with respect to a Tenant Trigger Event, a Tenant Cure Event (as defined below) has taken place or (e) with respect to a Tenant Downgrade Trigger Event, a Tenant Downgrade Cure Event (as defined below) has taken place.

A “**DSCR Trigger Event**” means the date on which the debt service coverage ratio (as calculated in the Chemours HQ Loan documents and based on the trailing three-month period immediately preceding the date of determination) is less than 1.35x.

A “**DSCR Cure Event**” means the debt service coverage ratio (as calculated in the Chemours HQ Loan documents and based on the trailing three-month period immediately preceding the date of determination) is at least 1.45x for two consecutive quarters.

A “**Tenant Trigger Event**” means (i) if any specified tenant is in default under its specified tenant lease beyond applicable notice and cure periods, (ii) any specified tenant or specified tenant Guarantor is involved in a bankruptcy action, (iii) any specified tenant terminates its specified tenant Lease or gives notice or otherwise announces it intends to terminate its specified tenant Lease, or (iv) if any specified tenant “goes dark”, vacates, ceases to occupy or discontinues its operations in more than 40% of the applicable specified tenant space or if any specified tenant gives notice that it intends

to “go dark”, vacate, cease to occupy or discontinue its operations in more than 40% of the applicable specified tenant space.

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LOAN #5: CHEMOURS HQ

A “**Tenant Cure Event**” means (i) if the Tenant Trigger Event is due solely to the specified tenant being in default under its specified tenant lease beyond applicable notice and cure periods, the applicable specified tenant has cured all of the defaults under the applicable specified tenant lease, (ii) for any other Tenant Trigger Event, the replacement of the applicable specified tenant with one or more acceptable replacement tenants pursuant to one or more leases approved by the lender covering the specified tenant space and such tenants being in occupancy and paying full contractual rent without right of offset or free rent credit (unless such free rent is deposited with lender) and without any further landlord obligations for tenant improvement work, tenant allowance or leasing commissions (unless an amount sufficient to cover such obligations is deposited with lender) and delivery of a tenant estoppel acceptable to the lender, or (iii) if the Tenant Trigger Event is due solely to the specified tenant going dark or giving notice that it intends to go dark as provided in subsection (iv) in the definition of Tenant Trigger Event, (A) the replacement of the applicable “dark” specified tenant with one or more acceptable replacement Tenants pursuant to one or more leases approved by the lender covering the specified tenant space or the vacated portion of the specified tenant space and such tenants being in occupancy and paying full contractual rent without right of offset or free rent credit (unless such free rent is deposited with the lender) and without any further landlord obligations for tenant improvement work, tenant allowance or leasing commissions (unless an amount sufficient to cover such obligations is deposited with the lender) and delivery of a tenant estoppel acceptable to the lender, or (B) such “dark” specified tenant returns to full occupancy of its premises and paying full contractual rent without right of offset or free rent credit (unless such free rent is deposited with Lender) and delivery of a tenant estoppel acceptable to the lender.

A “**Tenant Downgrade Trigger Event**” means if the rating of the long-term unsecured debt obligations of Chemours (the initial guarantor under the lease) is (i) withdrawn by any of Moody’s, S&P or Fitch, or (ii) downgraded by S&P or Fitch from its rating at origination to B+ or lower or downgraded by Moody’s from its rating at origination to B1 or lower.

A “**Tenant Downgrade Cure Event**” means if the rating of the long-term unsecured debt obligations of Chemours is (i) reinstated by the rating agency that withdrew such rating, or (ii) increased to BB- or higher (or the equivalent) by the rating agency that downgraded its rating, such that long-term unsecured debt obligations are then rated ‘BB-’ or higher by S&P and Fitch and ‘Ba3’ or higher by Moody’s.

Property Management. The property is managed by BPG Real Estate Services LLC. The lender may require the borrower to terminate the management agreement and replace the manager with a qualified manager in accordance with the terms of the Chemours HQ Loan documents, pursuant to a replacement management agreement, if (a) an event of default under the Chemours HQ Loan documents has occurred and remains uncured, (b) the manager becomes insolvent or a debtor in any bankruptcy or insolvency proceeding, which in the case of an involuntary bankruptcy only, if such involuntary petition is not dismissed within 60 days of filing, or (c) a default by the manager occurs under the management agreement and continues beyond applicable cure periods.

- **Current Mezzanine or Secured Subordinate Indebtedness.** None.
- **Permitted Future Mezzanine or Secured Subordinate Indebtedness.** Not permitted.
- **Partial Release of Collateral.** Not permitted.

Terrorism Insurance. The borrower is required to maintain the following insurance policies covering perils of terrorism and acts of terrorism (and losses therefrom): (i) an “all-risk” insurance policy that provides coverage in an amount equal to 100% of the full replacement cost of the Chemours HQ Property, with no deductible in excess of \$25,000 (provided, however, that deductibles for damage caused by earth movement and wind may not exceed 5% of the total insurable value of the applicable individual property), and (ii) a business interruption insurance policy that provides 18 months of business interruption coverage plus up to six months of extended indemnity. See “*Risk Factors—Terrorism Insurance May Not Be Available for All Mortgaged Properties*” in the Preliminary Prospectus.

Historic Tax Credits. The Chemours Building is a historic building which was rehabilitated by a BPG affiliate in accordance with federal tax code and state regulations to make it eligible for federal and state historic tax credits (“**HTC**”).

- The federal tax credits are subject to recapture if, prior to the five year period ending on April 24, 2024 (the “**Recapture Period**”), among other things: (i) the holder of the tax credits no longer has an ownership interest in the property, (ii)

the property is physically altered in a manner that impacts that status of the Chemours Building as a certified historic structure, or (iii) the property is leased or transferred to a tax-exempt entity which causes the property to be used as a “tax-exempt use property” (as defined in the IRS code) (a “**Disqualified Transferee**”). Disqualified

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LOAN #5: CHEMOURS HQ

Transferees are generally limited to non-profits and governmental entities, foreign persons or entities and other non-tax paying entities. The amount of credits subject to recapture decreases each year by 20% until the expiration of the Recapture Period. The BPG affiliate passed the federal tax credits through a HTC master lease covering the Chemours HQ Property (the “**HTC Master Lease**”) to an affiliate of PNC as an investor in the HTC master lessee. The state tax credits were reserved to BPG. At origination of the Chemours HQ Loan, the estimated amount of the federal tax credits generated by the BPG rehabilitation and held by PNC for the Chemours HQ Property was \$13,745,716. The HTC structure is expected to terminate pursuant to a put option agreement whereby, upon the expiration of the Recapture Period, PNC will have the option to require the managing member of the HTC master lessee to purchase PNC’s interest in the HTC master lessee for the put price as further described in the Preliminary Prospectus. At origination of the Chemours HQ Loan, the amounts of the priority return owed to PNC, the put price, and the estimated excess profits payments due PNC were escrowed with the lender. The reserve is subject to annual adjustment to insure that the reserve is sufficient to cover the estimated payment due PNC during the Recapture Period. See “*Risk Factors—Risks Related to Zoning Non-Compliance and Use Restrictions*” in the Preliminary Prospectus for additional information regarding the federal tax credits related to the Chemours HQ Property.

The HTC Master Lease is subordinate to the mortgage securing the Chemours HQ Loan in exchange for the lender’s agreement, among other things, to not terminate the HTC Master Lease by or following a foreclosure of the Chemours HQ Loan pursuant to a subordination, non-disturbance and attornment agreement (the “**HTC SNDA**”). Pursuant to the HTC SNDA, the lender agreed that, among other things, neither the lender nor any transferee may permit any transfer to a Disqualified Transferee during the Recapture Period. A transfer includes any judicial or non-judicial sale of the Chemours HQ Property or the HTC master lessee’s managing member interest pursuant to a foreclosure action. For transfers other than a sale pursuant to a foreclosure action, the lender may not effect a transfer unless the lender pre-identifies the transferee for pre-clearance by PNC that the transfer will not cause a recapture event with respect to the HTCs. If the lender or any transferee takes title to the HTC master lessee’s managing member interest by reason of foreclosure, the managing member will continue to have the right to operate the Chemours HQ Property under the HTC master lessee operating agreement (including engaging a property manager and entering into leases); subject to PNC’s consent rights with respect to those actions or occurrences that are likely to dilute the interest of PNC in the HTC master lessee or cause a recapture event with respect to the HTCs. The limitations set forth in the HTC SNDA may limit the lender’s workout and resolution remedies in the case of an event of default under the Chemours HQ Loan agreement during the Recapture Period. For additional information with respect to the HTC structure for the Chemours HQ Loan and risks related thereto, see “*Risk Factors—Risks Relating to Tax Credits*” and “*Description of the Mortgage Pool—Certain Terms of the Mortgage Loans—Real Estate and Other Tax Considerations*” in the Preliminary Prospectus.

Condominium Structure. The Chemours HQ Property consists of the borrower’s condominium unit of floors 3-14 of office space in the Chemours Building that is subject to a condominium regime governing a total of 7 condominium units. The other condominium units consist of a hotel condominium unit, a to be renovated residential condominium unit, a retail condominium unit, a theatre condominium unit and two other office condominium units are part of the collateral for the Chemours HQ Loan. The Chemours HQ Loan sponsor owns 29.99% of the condominium and has the right to appoint one of the seven board members on the executive board of the condominium association (the “**Executive Board**”). The Executive Board votes based on the respective ownership interests of unit holders that appointed such board member.

- The Chemours HQ Loan borrower does not control the Executive Board, but has certain blocking rights on certain major decisions, together with other protections when any decision affects its unit. The sole tenant of the Chemours HQ property, Chemours, also has rights to block certain matters so long as it is the tenant. The related condominium declaration may not be amended in any material respect without the affirmative vote of a supermajority of the members consisting of 75% ownership of the condominium association. The lender also has notice and cure rights under the condominium documents. See “*Risk Factors—Lending on Condominium Units Creates Risks for Lenders That Are Not Present When Lending on Non-Condominiums*” in the Preliminary Prospectus.

Shari’ah Compliant Structure. The Chemours HQ Property is owned by a special purpose entity borrower owned by a third party services company. The borrower master leases the Chemours HQ Property to a special purpose entity (the “**Sponsor Master Lessee**”) that is indirectly owned by Shari’ah compliant investors (the “**Sponsor Master Lease**”).

- The rent under the Sponsor Master Lease is equal to the debt service due to the lender under the Chemours HQ Loan. The Sponsor Master Lessee has collaterally assigned all tenant leases at the Chemours HQ Property to the borrower (which has assigned its interest to the lender), and the Sponsor Master Lease is subordinate to the mortgage securing

the Chemours HQ Loan. In addition, the Sponsor Master Lessee granted a mortgage on the Sponsor Master Lease to the borrower, which in turn assigned that mortgage to the lender. The Sponsor Master

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LOAN #5: CHEMOURS HQ

Lease is subordinate to the mortgage securing the Chemours HQ Loan. In the event of a foreclosure, the Sponsor Master Lease would be terminated and the HTC Master Lease (described above) would become a direct lease between the borrower and the HTC master lessee. For additional information and risk factors related to Shari'ah compliant loans, see "*Risk Factors —Risks Relating to Shari'ah Compliant Loans*" in the related Preliminary Prospectus.

- Permitted PACE Financing.** Under the Chemours HQ Loan documents, the lender has agreed to not unreasonably withhold its consent to the condominium entering into a property assessed clean energy (PACE) loan that is repaid through multi-year assessments against the condominium units, including the Chemours HQ Property, subject to the terms and conditions set forth in the Chemours HQ Loan documents including, without limitation, (i) the PACE loan is required to be used for the installation, construction, repair and replacement of improvements to chiller plant and steam plant boilers, (ii) the total amount of the PACE loan (including principal and interest accrued thereon) allocated to the Chemours HQ Property does not exceed \$1,200,000, (iii) the PACE loan amortizes over a period of at least 25 years, (iv) the annual debt service on the PACE loan allocated to the Chemours HQ Property does not exceed \$115,000, (v) assuming the full amount of the PACE loan is advanced, loan-to-value ratio of the Chemours HQ Loan and the PACE loan will not be greater than 62%, (vi) the lien of the PACE loan on the Chemours HQ Property is be limited to the pro-rata share of the PACE loan allocated to the Chemours HQ Property, (vii) Chemours shall have consented to the PACE loan and the chiller upgrade and shall have confirmed it shall be responsible for the payment of the monthly payments allocated to the Chemours HQ Property under the PACE loan and (viii) if requested by the lender, delivery of a rating agency confirmation. At origination, the borrower deposited with the lender \$600,000 for a permitted PACE loan reserve and is required to deposit another \$600,000 (or a higher amount proportionate to any increase in the size of the PACE loan) as a condition to the lender's consent to the PACE loan, each as additional collateral for the Chemours HQ Loan. See "*Risk Factors—Various Other Laws Could Affect the Exercise of Lender's Rights*" in the Preliminary Prospectus.

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LOAN #6: OSBORN TRIANGLE



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LOAN #6: OSBORN TRIANGLE

1 Portland Street



610 Main Street North



700 Main Street
(South Wing)

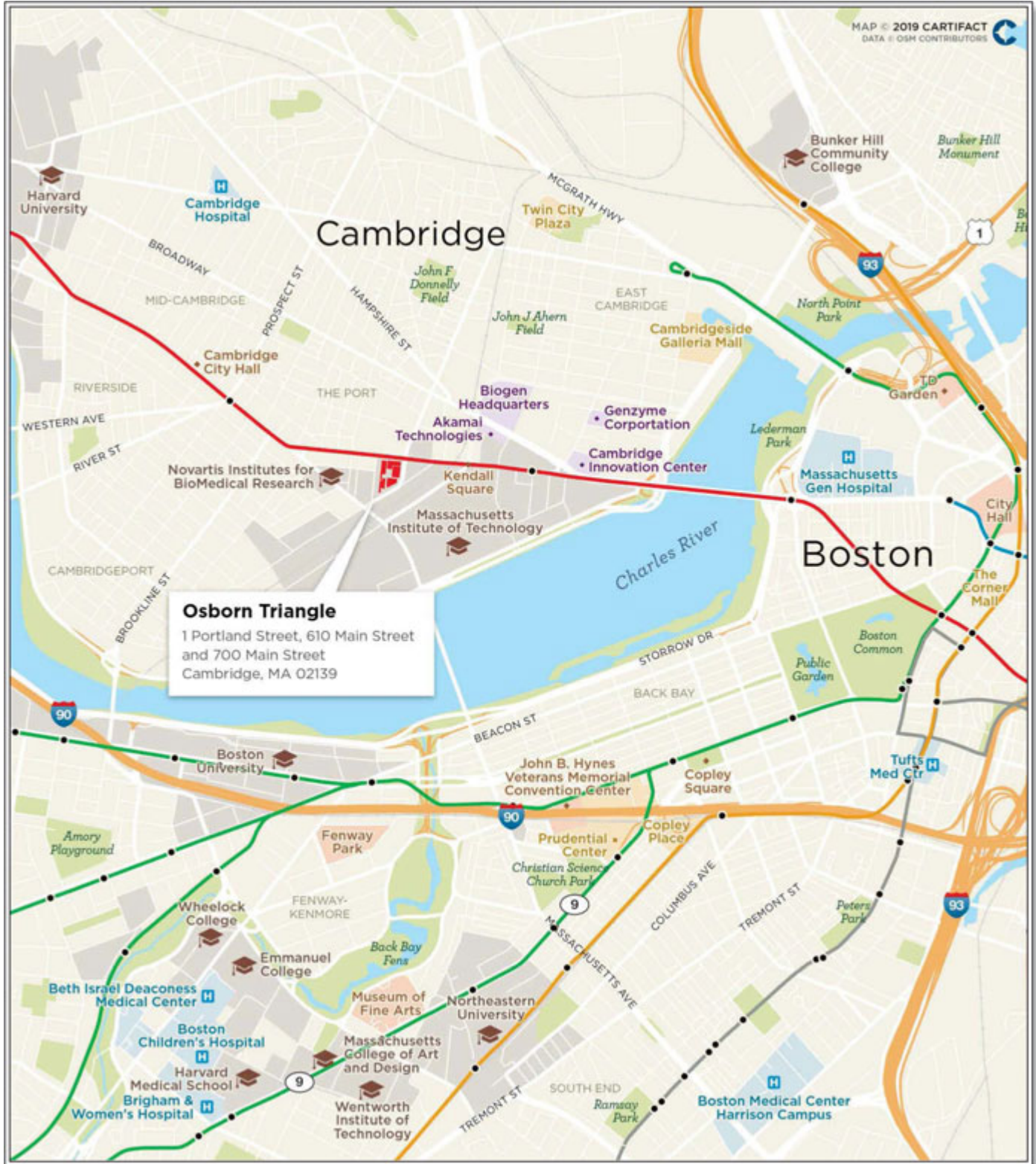


700 Main Street
(North Wing)



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which have been contributed to the JPMCC 2019-OSB transaction, and the non-controlling Notes A-3 (\$50,000,000), A-4 (\$30,000,000), A-5 (\$25,000,000) and A-6 (\$25,000,000), which are expected to be contributed to one or more future commercial mortgage securitization transactions. The Osborn Triangle Loan Combination, which accrues interest at an interest rate of 3.79700% *per annum*, was originated by JPMorgan Chase Bank, National Association (“**JPMCB**”) on May 16, 2019, had an original principal balance of \$575,000,000 and has an outstanding principal balance as of the Cut-off Date of \$575,000,000. The proceeds of the Osborn Triangle Loan Combination along with the principal’s new cash contribution were primarily used to purchase the Osborn Triangle Property and pay origination costs. The Osborn Triangle Loan received a credit assessment of BBB-sf by Fitch and AA by Morningstar.

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LOAN #6: OSBORN TRIANGLE

Loan Combination Summary

Note	Original Balance	Cut-off Date Balance	Note Holder	Controlling Piece
A-1	\$250,000,000	\$250,000,000	JPMCC 2019-OSB	Yes
A-2	\$50,000,000	\$50,000,000	Benchmark 2019-B12	No
A-3	\$50,000,000	\$50,000,000	JPMCB ⁽¹⁾	No
A-4	\$30,000,000	\$30,000,000	JPMCB ⁽¹⁾	No
A-5	\$25,000,000	\$25,000,000	JPMCB ⁽¹⁾	No
A-6	\$25,000,000	\$25,000,000	JPMCB ⁽¹⁾	No
B-1	\$145,000,000	\$145,000,000	JPMCC 2019-OSB	No
Total / Wtd. Avg.	\$575,000,000	\$575,000,000		

(1) Expected to be contributed to one or more future securitization transactions.

The Osborn Triangle Loan Combination had an initial term of 120 months, has a remaining term of 118 months as of the Cut-off Date and requires monthly payments of interest only for the term of the Osborn Triangle Loan. The scheduled maturity date of the Osborn Triangle Loan Combination is the due date in June 2029. Provided no event of default has occurred and is continuing under the Osborn Triangle Loan Combination documents, the borrowers may prepay the Osborn Triangle Loan Combination in whole, but not in part, after July 31, 2021, provided that the borrowers pay the greater of a yield maintenance premium or a prepayment premium equal to 1.0% of the principal amount being prepaid. The Osborn Triangle Loan Combination is prepayable without penalty on or after December 1, 2028. Additionally, the Osborn Triangle Loan Combination may be prepaid in part in connection with the release of the 1 Portland Street mortgaged property and/or the 700 Main Street mortgaged property, subject to the satisfaction of certain related conditions set forth in the loan documents. See "Release of Collateral" below for additional information.

The Mortgaged Properties. The Osborn Triangle Property is a collection of three Class A office/laboratory buildings totaling 676,947 SF and a 650-space parking garage located directly adjacent to the Massachusetts Institute of Technology ("MIT") campus in Cambridge, Massachusetts. The collateral for the Osborn Triangle Loan consists of 610 Main Street North, 1 Portland Street, 700 Main Street and a subterranean 650-space parking garage situated on approximately 4.8 acres of land. The three properties are set around Watson Court, a central green space with outdoor seating. The Osborn Triangle Property was designed by Boston-based Elkus Manfredi Architects, Lab Architect Group and Tsai Kobus and completed by MIT Investment Management Company ("MITIMCo"). 610 Main Street North is LEED Gold certified and designed with electric vehicle charging stations, a reflective roof as well as water efficient fixtures and irrigation. 1 Portland Street has efficient layouts for a variety of office and laboratory requirements. 700 Main Street was converted from an industrial building into a life science facility in 2002, further expanded in 2012 and offers a modern tenant experience combined with preserved historical architecture.

Portfolio Summary

Property Name	Year Built / Renovated	SF	Allocated Loan Combination Cut-off Date Balance	% Allocated Loan Combination Original Balance	Appraisal Date	Appraised Value ⁽¹⁾	% Appraised Value	UW NCF	% of UW NCF
610 Main Street North	2016 / NAP	278,738	\$20,182,609	40.4%	4/11/2019	\$462,000,000	39.9%	\$23,500,965	45.5%
1 Portland Street	2013 / NAP	229,330	17,826,087	35.7	4/11/2019	416,000,000	35.9	17,670,161	34.2
700 Main Street	Late 1800s / 2002, 2012	168,879	11,991,304	24.0	4/11/2019	280,000,000	24.2	10,501,964	20.3
Total / Wtd. Avg.		676,947	\$50,000,000	100.0%		\$1,158,000,000	100.0%	\$51,673,090	100.0%

(1) Source: Appraisal.

The Osborn Triangle Property is currently 100.0% occupied by seven tenants (three office tenants and four retail tenants). The three office tenants at the Osborn Triangle Property consist of Pfizer, Novartis Institutes for Biomedical Research, Inc. ("**Novartis**") and Lab Central Inc. ("**Lab Central**"). Retail tenants include Sulmona Restaurant Group, Café Luna, Boston Burger and Revela and comprise 1.3% of NRA and 0.6% of underwritten base rent.

The largest tenant based on underwritten base rent, Pfizer (73.8% of NRA; 77.9% of underwritten base rent; rated A1 / AA / A+ by Moody's / S&P / Fitch), occupies a total of 499,386 SF of office and laboratory space and has been a tenant at the Osborn Triangle Property since December 2013. Pfizer leases 229,330 SF of space at 1 Portland Street which expires in January 2024 and 270,056 SF of space at 610 Main Street North which expires in December 2031, both with two, five-year renewal options. Pfizer subleases a portion of its space totaling 163,644 SF to CRISPR Therapeutics, Lab Central, Casebia Therapeutics and KSQ Therapeutics. Pfizer is one of the world's largest

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biopharmaceutical companies, with a global portfolio that encompasses medicines, vaccines and healthcare products. Headquartered in New York City with approximately 92,400 employees worldwide, Pfizer's products are sold in over 125 countries. As of 2018, Pfizer reported revenues of approximately \$53.6 billion. Pfizer's location at 610 Main Street North and 1 Portland Street employs approximately 1,000 people and focuses on pharmaceutical and biologics research, drug metabolism, biotechnology and therapeutic areas including inflammation, immunology, rare diseases and internal medicine. In addition to Pfizer's location at the Osborn Triangle Property, Massachusetts is home to Pfizer's research and manufacturing site in Andover and serves as the global headquarters for Pfizer's Center for Therapeutic Innovation.

The second largest tenant based on underwritten base rent, Novartis (14.8% of NRA; 14.1% of underwritten base rent; rated A1 / AA- / AA- by Moody's / S&P / Fitch), occupies 99,883 SF of office and laboratory space through July 2024 with two, five-year renewal options and has been a tenant at the Osborn Triangle Property since March 2014. Novartis is a multinational medicine company based in Basel, Switzerland with 125,000 employees worldwide. As of 2018, Novartis reported sales of \$51.9 billion. Novartis' location at 700 Main Street is home to Novartis Institutes for BioMedical Research ("NIBR"), the innovation engine of Novartis which focuses on discovering new drugs. NIBR employs approximately 6,000 people in six research campuses across the globe. In addition to Novartis' 700 Main Street location, Novartis has complementary Cambridge locations along Massachusetts Avenue, Windsor Street and within Technology Square.

The third largest tenant based on underwritten base rent, Lab Central (10.2% of NRA; 7.4% of underwritten base rate), occupies 68,996 SF of office and laboratory space through March 2027 with two five-year renewal options and has been a tenant at the Osborn Triangle Property since April 2013. Lab Central is a shared laboratory space designed as a launchpad for potential life-sciences and biotech startups. Founded in 2013, Lab Central was primarily funded by two grants from the Massachusetts Life Sciences Center and MIT. 700 Main Street serves as Lab Central's headquarters and primary incubator space. Along with 610 Main Street North, Lab Central's two-building campus offers fully permitted laboratory and office space with a capacity to serve 450 scientists and entrepreneurs in about 70 companies. Lab Central subleases additional space from Pfizer at 610 Main Street North.

The following table presents certain information relating to the tenants at the Osborn Triangle Property:

Owned Tenants by Underwritten Base Rent⁽¹⁾

Tenant Name	Credit Rating (Fitch/MIS/ S&P) ⁽²⁾	Tenant GLA	% of Owned GLA	UW Base Rent ⁽³⁾	% of Total UW Base Rent ⁽³⁾	UW Rent \$ per SF ⁽³⁾	Lease Expiration	Lease Escalations	Renewal / Extension Options
Pfizer ⁽⁶⁾	A+/A1/AA	499,386	73.8%	\$40,772,108	77.9%	\$81.64	Various ⁽⁴⁾	Various ⁽⁵⁾	2, 5-Year
Novartis	AA-/A1/AA-	99,883	14.8	7,382,067	14.1	73.91	7/31/2024	3% Annually	2, 5-Year
Lab Central	NR/NR/NR	68,996	10.2	3,853,357	7.4	55.85	3/31/2027	2.75% Annually	2, 5-Year
Sulmona Restaurant Group	NR/NR/NR	3,355	0.5	126,248	0.2	37.63	2/28/2027	3% Annually	1, 5-Year
Café Luna	NR/NR/NR	2,328	0.3	86,442	0.2	37.13	3/31/2027	3% Annually	1, 5-Year
Boston Burger	NR/NR/NR	1,984	0.3	71,523	0.1	36.05	9/30/2027	3% Annually	1, 5-Year
Revela	NR/NR/NR	1,015	0.1	47,854	0.1	47.15	7/31/2027	3% Annually	1, 5-Year
Total / Wtd. Avg. All Tenants		676,947	100.0%	\$52,339,600	100.0%	\$77.32			

(1) Based on the underwritten rent roll dated May 1, 2019.

(2) Certain ratings are those of the parent company whether or not the parent guarantees the lease.

UW Base Rent, % of Total UW Base Rent and UW Base Rent \$ per SF includes the present value of rent steps and a mark to market at the end of the lease term for Pfizer and Novartis. The average contractual rent per SF over the lease term is \$70.96 per SF for the 2024 Pfizer lease expiration, \$86.61 per SF for the 2031 Pfizer lease expiration and \$59.46 for the 2024 Novartis lease expiration. For the remaining tenants, the UW Base Rent, % of Total UW Base Rent and UW Base Rent \$ per SF includes rent steps through May 1, 2020.

(4) Pfizer leases 229,330 SF of space at 1 Portland Street which expires January 31, 2024. Pfizer leases 270,056 SF of space at 610 Main Street North which expires December 31, 2031.

- (5) Pfizer's lease associated with 139,212 SF of space at 610 Main Street North and 229,330 SF of space at 1 Portland Street has 2.75% lease escalations. Pfizer's lease associated with 130,844 SF of space at 610 Main Street North has 3% lease escalations. Pfizer subleases a portion of its space totaling 163,644 SF to CRISPR Therapeutics, Lab Central, Casebia Therapeutics and KSQ Therapeutics.
- (6) Casebia Therapeutics sub-subleases 5,184 SF of its space to Bayer's Life Hub Boston through March 31, 2024 at \$77.26 per SF plus 3.0% annual increases commencing April 1, 2019. Bayer reimburses expenses at a rate of \$4.40 per SF.

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The following table presents certain information relating to the lease rollover schedule at the Osborn Triangle Property, based on initial lease expiration dates:

Lease Expiration Schedule⁽¹⁾

Year Ending December 31	Expiring Owned GLA	% of Owned GLA	Cumulative % of Owned GLA	UW Base Rent ⁽²⁾	% of UW Base Rent Expiring ⁽²⁾	UW Base Rent \$ per SF ⁽²⁾	# of Expiring Leases
MTM	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2019	0	0.0	0.0%	0	0.0	\$0.00	0
2020	0	0.0	0.0%	0	0.0	\$0.00	0
2021	0	0.0	0.0%	0	0.0	\$0.00	0
2022	0	0.0	0.0%	0	0.0	\$0.00	0
2023	0	0.0	0.0%	0	0.0	\$0.00	0
2024	329,213	48.6	48.6%	25,600,102	48.9	\$77.76	2
2025	0	0.0	48.6%	0	0.0	\$0.00	0
2026	0	0.0	48.6%	0	0.0	\$0.00	0
2027	77,678	11.5	60.1%	4,185,425	8.0	\$53.88	5
2028	0	0.0	60.1%	0	0.0	\$0.00	0
2029	0	0.0	60.1%	0	0.0	\$0.00	0
2030 & Thereafter	270,056	39.9	100.0%	22,554,072	43.1	\$83.52	1
Vacant	0	0.0	100.0%	0	0.0	\$0.00	0
Total / Wtd. Avg.	676,947	100.0%		\$52,339,600	100.0%	\$77.32	8

(1) Certain tenants may have lease termination options that are exercisable prior to the originally stated expiration date of the subject lease and that are not considered in the Lease Expiration Schedule.

UW Base Rent, % of Total UW Base Rent Expiring and UW Base Rent \$ per SF includes the present value of rent steps and a mark to market at the end of the lease term for Pfizer and Novartis. The average contractual rent per SF over the lease term is \$70.96 per SF for the 2024 Pfizer lease expiration, \$86.61 per SF for the 2031 Pfizer lease expiration and \$59.46 per SF for the 2024 Novartis lease expiration. For the remaining tenants, the UW Base Rent, % UW Base Rent Expiring and UW Base Rent \$ per SF includes rent steps through May 1, 2020.

The following table presents certain information relating to historical leasing at the Osborn Triangle Property:

Historical Leased%⁽¹⁾

	2016	2017	2018	As of 5/1/2019 ⁽²⁾
610 Main Street North	99.0%	99.9%	100.0%	100.0%
1 Portland Street	100.0%	100.0%	100.0%	100.0%
700 Main Street	100.0%	100.0%	100.0%	100.0%
Osborn Triangle	99.6%	99.9%	100.0%	100.0%

(1) As provided by the borrowers and which represents average month-end occupancy for the indicated year unless otherwise specified.

(2) Based on the underwritten rent roll dated May 1, 2019.

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- Operating History and Underwritten Net Cash Flow. The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the Osborn Triangle Property:

Cash Flow Analysis⁽¹⁾

	2017	2018	T-12 3/31/2019	Underwritten	Underwritten \$ per SF
Base Rent	\$40,270,949	\$42,583,273	\$43,432,253	\$44,714,419	\$66.05
IG Rent Steps and Market Adjustment ⁽²⁾	0	0	0	7,625,181	11.26
Vacant Income	0	0	0	0	0.00
Total Reimbursement Revenue	13,282,194	14,252,881	14,607,789	16,481,111	24.35
Parking Income	1,920,448	2,339,140	2,363,122	2,255,641	3.33
Gross Revenue	\$55,473,591	\$59,175,294	\$60,403,164	\$71,076,352	\$105.00
Other Income ⁽³⁾	413,828	451,151	464,927	529,887	0.78
Vacancy & Credit Loss ⁽⁴⁾	0	0	0	(816,810)	(1.21)
Effective Gross Income	\$55,887,418	\$59,626,445	\$60,868,091	\$70,789,429	\$104.57
Real Estate Taxes	\$5,708,393	\$6,097,226	\$6,312,129	\$6,962,331	\$10.28
Insurance	469,641	153,730	128,547	247,479	0.37
Management Fee	580,053	521,434	516,241	1,000,000	1.48
Other Operating Expenses	7,092,520	8,949,407	8,903,369	8,845,203	13.07
Total Operating Expenses	\$13,850,608	\$15,721,797	\$15,860,286	\$17,055,013	\$25.19
Net Operating Income⁽⁵⁾	\$42,036,811	\$43,904,648	\$45,007,805	\$53,734,416	\$79.38
TI/LC	0	0	0	1,878,551	2.78
Capital Expenditures	0	0	0	182,776	0.27
Net Cash Flow	\$42,036,811	\$43,904,648	\$45,007,805	\$51,673,090	\$76.33
Occupancy	99.9%	100.0%	100.0%⁽⁶⁾	98.9%⁽⁴⁾	
NOI Debt Yield⁽⁷⁾	7.3%	7.6%	7.8%	9.3%	
NCF DSCR⁽⁷⁾	1.90x	1.98x	2.03x	2.33x	

Certain items such as straight line rent, interest expense, interest income, lease cancellation income, depreciation, amortization, debt service

- payments and any other non-recurring or non-operating items were excluded from the historical presentation and are not considered for the underwritten cash flow.
- Includes the present value of rent steps and a mark to market at the end of the lease term for Pfizer and Novartis. The average contractual rent per SF over the lease term is \$70.96 per SF for the 2024 Pfizer lease expiration, \$86.61 per SF for the 2031 Pfizer lease expiration and \$59.46 per SF for the 2024 Novartis lease expiration. For the remaining tenants, includes rent steps through May 1, 2020.
- Other Income consists of storage income, percentage rent (retail tenancy), sublease income and TI rent.
- Vacancy is underwritten to the blended economic vacancy of 1.1%. The blended vacancy reflects the appraiser's assumption of 2.0% market vacancy for 1 Portland Street and 700 Main Street, as well as the appraisers 0.0% vacancy assumption for 610 Main Street North because of its long term lease with credit tenant, Pfizer, which has a December 2031 expiration and is 2.5 years beyond the loan term. Other third party data sources show a submarket vacancy between 0.5% and 1.0% for buildings completed after 2009. The Osborn Triangle Property was completed or gut renovated between 2012 and 2016.
- The increase from T-12 3/31/2019 Net Operating Income to Underwritten Net Operating Income was primarily due to IG Rent Steps and Market Adjustment for Pfizer and Novartis (as described above).
- Based on the underwritten rent roll dated May 1, 2019.
- Metrics are calculated based on the Osborn Triangle Loan Combination.

- Appraisal.** According to the appraisal, the Osborn Triangle Property had an "as-is" appraised value of \$1,158,000,000 as of April 11, 2019.

<u>Property</u>	<u>Appraisal Approach</u>	<u>Value</u>	<u>Discount Rate</u>	<u>Capitalization Rate</u>
610 Main Street North	Discounted Cash Flow Approach	\$462,000,000	6.25%	5.25% ⁽¹⁾
1 Portland Street	Discounted Cash Flow Approach	\$416,000,000	6.25%	5.00% ⁽¹⁾
700 Main Street	Discounted Cash Flow Approach	\$280,000,000	6.25%	5.00% ⁽¹⁾

(1) Represents the terminal capitalization rate.

- **Environmental Matters.** Based on a Phase I environmental report dated April 10, 2019, the environmental consultant did not identify evidence of any recognized environmental conditions or recommendations for further action at the Osborn Triangle Property.

Market Overview and Competition. The Osborn Triangle Property is located in Cambridge, Massachusetts, within the Boston office market (specifically the East Cambridge/Kendall Square office submarket). Situated on approximately 4.8 acres of land directly adjacent to MIT, the Osborn Triangle Property is located in the East Cambridge neighborhood in a dynamic biotech cluster, which is bound by Main Street, Albany Street and Massachusetts Avenue. Osborn Triangle

- Property's location allows it to capitalize on its proximity to major institutional and research entities in Cambridge, affording its tenants immediate access to parking and public transportation, as well as the city's entertainment, hospitality and residential districts. The neighborhood is anchored by the Kendall/MIT MBTA Red Line subway station and the approximately 166-acre MIT campus. MIT's iconic Great Dome is less than 400 yards from the center of the Osborn Triangle Property. The Osborn Triangle Property is surrounded by a cluster of

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global life science/technology companies and fast-growing start-ups anchored by Akamai, Amazon, Apple, Biogen, Boeing, Broad Institute, Cambridge Innovation Center, Draper, Google, Koch Institute and Microsoft. Logan International Airport is located approximately 4.3 miles northeast of the Osborn Triangle Property and offers 40 airlines that fly non-stop to more than 100 domestic and international destinations. Furthermore, the Massachusetts Port Authority recently announced \$1.0 billion worth of investments to further expand the airport's international terminal, reconfigure other terminals and redesign its roadways.

According to the appraisal, the Osborn Triangle Property is located within the Boston metropolitan statistical area (the "**Boston MSA**"). As of 2018, the Boston MSA had an unemployment rate of approximately 3.3%, a median household income of approximately \$85,800 and a population of approximately 2.0 million.

East Cambridge/Kendall Square comprises nearly 21.0 million SF of world-class office and laboratory space complemented by a dense cluster of apartments, shopping destinations and dining amenities in addition to 2.5 acres of landscaped open space. Notable developments in the immediate area include the Cambridge Side Galleria mall, Canal Park, Riverview Office Park, Royal Sonesta Hotel and several high-rise residential condominium buildings. According to a third party research report, as of the fourth quarter of 2018, the East Cambridge submarket had approximately 7.4 million SF of laboratory space with approximately 1.4 million SF under construction. The average East Cambridge submarket vacancy in 2018 was approximately 0.2%. East Cambridge Class B NNN laboratory space had an average asking rents of \$78.00 per SF, while Class A NNN laboratory space commanded nearly an \$11 premium at \$88.80 per SF. Recent leasing in the Cambridge office/laboratory submarket in the first quarter of 2019 includes more than 620,000 SF to tenants including Infinity Pharmaceuticals, Boston Microfluidics, BetterLesson, Syros Pharmaceuticals, Invaio Sciences, Ultragenyx Pharmaceutical, HiFiBio Therapeutics and Casma Therapeutics.

In 2018, the Greater Boston area had approximately 20.3 million SF of laboratory space with an average vacancy rate of 4.9%. The laboratory submarkets across Greater Boston combined for 1.5 million SF of net absorption in 2018. 62 public companies with a combined market value of approximately \$170.0 billion, the majority of them biotechnology firms are headquartered in Cambridge. Global pharmaceutical companies, including Takeda Pharmaceutical Co., Sanofi SA and Novartis AG, also have extensive research operations in the city. In the fourth quarter of 2018, tenants absorbed 468,000 SF of biotechnology-focused laboratory real estate in Greater Boston, with much of that growth occurring at the last of the Alexandria Center at Kendall Square buildings to be delivered. Bristol-Myers Squibb took occupancy of 208,000 SF, while Facebook moved into 133,000 SF and furthered a trend of traditional office users paying significant premiums for Kendall Square space, even when that space was developed for lab use.

As of the first quarter of 2019, the Cambridge – East office submarket contained approximately 9.4 million SF of office space, had a direct vacancy rate of 1.4% and average asking NNN rents of \$94.52 per SF (compared to underwritten gross rent of \$77.32 per SF at the Osborn Triangle Property) according to a third party research report. As of the same time period, according to the appraisal, the Cambridge – East laboratory submarket contained approximately 12.3 million SF of laboratory space, had a direct vacancy rate of 0.9% and average asking NNN rents of \$94.75 per SF (compared to underwritten gross rent of \$77.32 per SF at the Osborn Triangle Property) according to a third party research report. The appraisal surveyed a competitive set of rent comparables from six other class A/B office/laboratory buildings in the Kendall Square. Base rent across the approximately 670,007 SF of leases ranges from \$76.00 to \$95.00 per SF (highlighted in the chart below). The appraisal concluded office/laboratory market rent of \$87.50 per SF and retail space market rent of \$45.00 per SF. Based on the appraiser's analysis and concluded market rent, the Osborn Triangle Property's in-place rent is approximately 24.3% and 17.4% below market with respect to office/laboratory and retail space, respectively.

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The following table presents certain information relating to comparable buildings for the Osborn Triangle Property:

Office Building Comparables⁽¹⁾

Property Name	Lessee	Lease Date	NRA	Lease Term	Lease Type	Rent PSF
238 Main Street	Bayer	Jun-2021	62,500	12 Yrs. 7 Mos.	NNN	\$95.00
One Main Street	IPSEN	Jun-2019	31,750	10 Yrs.	NNN	\$90.00
301 Binney Street	Cyclerion Therapeutics, Inc.	Jun-2019	114,454	10 Yrs. 3 Mos.	NNN	\$90.00
301 Binney Street	Generation Bio	May-2019	71,462	10 Yrs.	NNN	\$86.00
301 Binney Street	Ironwood Pharmaceuticals	Apr-2019	108,108	5 Yrs. 9 Mos.	NNN	\$79.31
301 Binney Street	Momenta Pharmaceuticals, Inc.	Jan-2018	79,863	7 Yrs. 7 Mos.	NNN	\$76.00
100 Binney Street	Bluebird Bio	Apr-2019	18,295	10 Yrs.	NNN	\$86.00
100 Binney Street	TCR2 Therapeutics, Inc.	Apr-2018	22,890	7 Yrs. 4 Mos.	NNN	\$76.00
100 Binney Street	Tango Therapeutics, Inc.	Aug-2017	22,000	8 Yrs. 4 Mos.	NNN	\$76.00
45 & 75 Sidney Street	Voyager	Nov-2018	47,493	8 Yrs.	NNN	\$83.00
399 Binney Street	Rubius Therapeutics, Inc.	Nov-2018	48,192	8 Yrs.	NNN	\$78.00
399 Binney Street	Relay Therapeutics	Nov-2018	43,000	10 Yrs.	NNN	\$80.00
Total/Wtd. Average			670,007			\$83.60

(1) Source: Appraisal.

The Borrowers. The borrowers are 610 Main Street North Leasehold LLC, 610 Main Street South Leasehold LLC, 700 Main Street Leasehold LLC and 610-700 Main Garage Leasehold LLC, each a Massachusetts limited liability company and structured to be a single purpose entity with two independent directors. The borrowers are indirectly owned or controlled by a joint venture between affiliates of Harrison Street Real Estate Capital (“**HSRE**”), MIT Investment Management Company (“**MITIMCo**”) and Bulfinch Companies, Inc. (“**Bulfinch**”). Legal counsel to the borrowers delivered a non-consolidation opinion in connection with the origination of the Osborn Triangle Loan Combination. HSRE is a real estate investment management firm headquartered in Chicago, Illinois with approximately \$18.3 billion in assets under management, and HSRE has raised more than approximately \$13.0 billion in discretionary equity capital for its private and public real estate offerings. Bulfinch specializes in the acquisition, development, management and leasing of commercial properties in the Boston area. Bulfinch owns and manages approximately 3.0 million square feet of medical, biotech and office assets. MITIMCo supports a wide array of MIT’s academic and research activities through returns generated by investing the institute’s financial resources. Founded in 1861, MIT presently enrolls approximately 11,500 undergraduate and graduate students and employs approximately 12,600 people, including 1,000 professors, with 89 Nobel Laureates among current and former members of the MIT community.

Escrows. On each due date, the borrowers are required to fund the following reserves with respect to the Osborn Triangle Loan Combination: (i) a tax reserve in an amount equal to one-twelfth of the amount that the lender estimates will be necessary to pay taxes over the then succeeding 12-month period (such reserve has been conditionally waived so long as no event of default under the related loan documents has occurred and is continuing, and the borrowers have provided satisfactory evidence that taxes have been paid in accordance with the requirements of the Osborn Triangle Loan documents) and (ii) an insurance reserve in an amount equal to one-twelfth of the amount that the lender estimates will be necessary to cover premiums over the then succeeding 12-month period (such reserve has been conditionally waived so long as no event of default under the related loan documents has occurred and is continuing, and the borrowers maintain a blanket policy meeting the requirements of the Osborn Triangle Loan Combination documents). In addition, in the event the borrowers have elected to cure a Tenant Trigger (as defined below) by depositing the applicable cure deposit, the borrowers are required to fund a reserve for tenant improvements and/or leasing commissions in an amount equal to \$3.625 per square foot for each month remaining in the applicable non-renewal or termination period under the related lease.

Lockbox and Cash Management. The Osborn Triangle Loan Combination documents require a hard lockbox and springing cash management. The borrowers were required at origination to deliver tenant direction letters to each existing tenant at the Osborn Triangle Property directing each tenant to remit its rent checks directly to the lender-controlled

lockbox. The borrowers are also required to deliver a tenant direction letter to each future commercial tenant. So long as no Cash Sweep Event (as defined below) then exists, all funds deposited into the lockbox account are required to be transferred on each business day to or at the direction of the borrower. Upon the occurrence and during the continuance of a Cash Sweep Event, all funds in the lockbox account are required to be swept on each business day to a cash management account under the control of the lender to be applied and disbursed for payment of taxes, insurance premiums, operating expenses, debt service, reserves, and other amounts payable in accordance with the Osborn Triangle Loan Combination documents, and all excess cash flow funds remaining in the cash

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management account after the application of such funds in accordance with the Osborn Triangle Loan Combination documents are required to be held by the lender in an excess cash flow reserve account as additional collateral for the Osborn Triangle Loan Combination. Upon the occurrence and during the continuance of an event of default under the Osborn Triangle Loan Combination documents or any bankruptcy action of the borrowers or property manager, the lender may apply funds to the debt in such priority as it may determine.

A “**Cash Sweep Event**” will commence upon the occurrence of (i) an event of default, (ii) a bankruptcy action of any individual borrower of the property manager, (iii) the date the debt service coverage ratio is less than 1.25x based on the trailing three month period or (iv) either Pfizer or Novartis (A) failing to renew its lease 12 months prior to its lease expiration date, or (B) going “dark”, vacating, or abandoning its premises for a period of 90 consecutive days (excluding commercially reasonable periods in connection with a restoration of the Osborn Triangle Property) (each of (A) and (B), a “**Tenant Trigger**”), and will end, (a) with respect to clause (i), upon a cure of the event of default and the lender’s acceptance of such cure, (b) with respect to clause (ii) solely with respect to the property manager, the replacement of the property manager with a qualified manager under a replacement management agreement within 60 days, (c) with respect to clause (iii), if the debt service coverage ratio is at least 1.25x for two consecutive calendar quarters based on the trailing three month period and (d) with respect to clause (iv) with either (1) the replacement of Pfizer or Novartis, as applicable, with one or more replacements tenant(s) approved by the lender pursuant to one or more lease(s) for all or substantially all of the premises leased to Pfizer and/or Novartis or such less space, provided that the annual rental and other payments is in an amount sufficient to achieve a debt service coverage ratio of 1.25x for two consecutive calendar quarters or (2) at the borrowers’ election, the borrowers will have deposited cash or an acceptable letter of credit in an amount equal to \$3.625 per SF per month for each month remaining in the non-renewal or termination period in the Pfizer lease or Novartis lease.

Property Management. The Osborn Triangle Property is managed by Jones Lang LaSalle Americas, Inc., a Maryland corporation. The borrowers may terminate the property manager and replace it with a qualified manager that meets the requirements of the Osborn Triangle Loan Combination documents. The lender has the right to require the borrowers to terminate the management agreement and replace the manager in accordance with the Osborn Triangle Loan Combination documents if (i) an event of default occurs and remains uncured under the Osborn Triangle Loan Combination, (ii) the manager becoming insolvent or a debtor in any bankruptcy or insolvency proceeding or (iii) there is an event of default of the manager under the management agreement beyond all applicable cure periods. The borrowers are permitted to terminate the existing management agreement and replace manager with a pre-approved Bulfinch manager, subject to delivery of a management agreement and collateral assignment of management each in the forms pre-approved by the lender and attached as exhibits to the mortgage loan agreement.

Current Mezzanine or Secured Subordinate Indebtedness. The Osborn Triangle Junior Non-Trust Note, with an outstanding principal balance as of the Cut-off Date of \$145.0 million, accrues interest at a fixed rate of 3.79700% per annum. The Osborn Triangle Junior Non-Trust Note had a 120-month term and is interest only for the full term. For additional information, see “*Description of the Mortgage Pool—The Loan Combinations—The Osborn Triangle Pari Passu-AB Loan Combination*” in the Preliminary Prospectus.

Based on the total combined debt of \$575.0 million, the Cut-off Date LTV Ratio, Maturity Date LTV Ratio, DSCR Based on Underwritten NCF and Debt Yield Based on Underwritten NOI are illustrated below:

Financial Information

	<u>Osborn Triangle Senior Notes</u>	<u>Osborn Triangle Loan Combination</u>
Cut-off Date Balance	\$430,000,000	\$575,000,000
Cut-off Date LTV Ratio	37.1%	49.7%
Maturity Date LTV Ratio	37.1%	49.7%
DSCR Based on Underwritten NCF	3.12x	2.33x
Debt Yield Based on Underwritten NOI	12.5%	9.3%

Future Mezzanine or Secured Subordinate Indebtedness. None, but the upper tier beneficial owners of the borrowers are permitted to pledge up to 75% of the direct or indirect equity interests in HSRE-Osborn Core Holding, LLC as part

of a corporate financing, subject to satisfaction of certain terms and conditions in the Osborn Triangle Loan Combination documents including, without limitation: (i) the pledge is to an institutional investor meeting the requirements of the loan documents; (ii) at least 75% of the permitted pledge is secured by assets other than the

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LOAN #6: OSBORN TRIANGLE

Osborn Triangle Property or the direct or indirect interests in the Osborn Triangle Property; and (iii) the pledge will not result in a change in control of the borrowers.

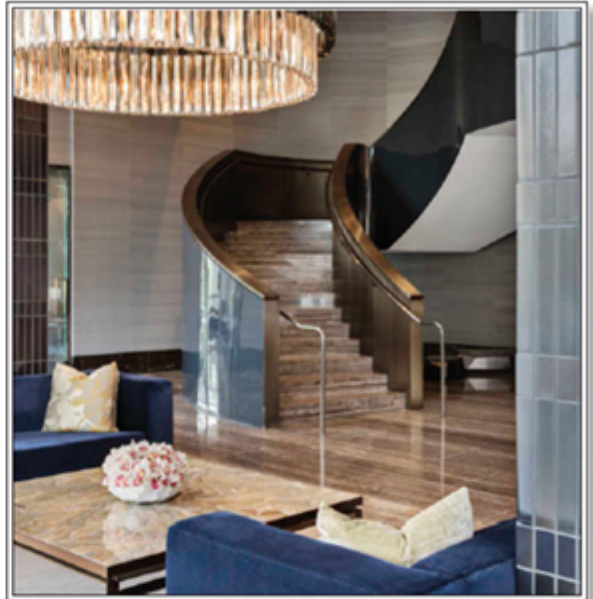
Release of Collateral. The Osborn Triangle Loan Combination documents provide that the borrower may release either the 1 Portland Street and/or the 700 Main Street properties from the lien of the Osborn Triangle Loan Combination documents after July 1, 2021, subject to the satisfaction of certain terms and conditions including, without limitation (i) the payment of a release price equal to 110% of the allocated loan amount for such property, plus the payment of a yield maintenance premium (if applicable), (ii) the debt service coverage ratio (as calculated in the Osborn Triangle Loan Combination documents) for the properties then remaining subject to the lien of the Osborn Triangle Loan Combination documents based on the trailing 12 month period is equal to or greater than the greater of (a) 2.03x and (b) the debt service coverage ratio for all of the Osborn Triangle Property (including the property subject to the release) based on the trailing 12 month period, (iii) the remaining properties (after the release) will not be in violation of the condominium documents, the Master Lease documents, any leases or the then applicable laws, and the borrower continues to control the board of trustees of the condominium association and (iv) the borrower may not lease any space at the released property to an existing tenant unless either (a) the borrower has re-leased the space in the Osborn Triangle Property to a new tenant with an effective rent per square foot in an amount equal to or greater than the tenant that was relocated or (b) the lender consents to such relocation (which consent may not be unreasonably withheld, conditioned or delayed). The Osborn Triangle Loan Combination documents provide that if the loan-to-value ratio exceeds or would exceed 125% immediately after the release, no release will be permitted unless the principal balance of the Osborn Triangle Loan Combination is prepaid by an amount set forth in the Osborn Triangle Loan Combination documents or the borrower delivers a REMIC opinion. The borrower is not permitted to release the 610 Main Street North or parking garage properties.

Condominium and Master Lease Structure. The Osborn Triangle Property is subject to a condominium declaration, which divides the underlying property into four units, the 610 Main Street North unit, the 610 Main Street South unit (a/k/a/ 1 Portland Street), the 700 Main Street unit and the parking garage unit. The fee interests in the condominium units are owned by an affiliate of MIT, which is also the declarant under the condominium declaration. The fee owner of the units master leases each unit to the individual borrower, and the Osborn Triangle Loan Combination is secured by such leasehold interests. Pursuant to each master lease, the fee owner of the units has delegated the rights to exercise its rights and privileges in its capacity as the fee owner of the units under the condominium declaration to each borrower, and the individual borrowers control 100% of the condominium interests. The term of each of the master lease expires on May 15, 2084. The base rent under each ground lease was prepaid in full prior to the origination of the Osborn Triangle Loan Combination. Please see *"Description of the Mortgage Pool—Statistical Characteristics of the Mortgage Loans—Leasehold Interests"* in the Preliminary Prospectus for additional information.

Terrorism Insurance. The Osborn Triangle Loan Combination documents require that the "all-risk" insurance policy required to be maintained by the borrower provide coverage for terrorism in an amount equal to the original principal balance of the loan, plus business interruption coverage in an amount equal to 100% of the projected gross income for the applicable property (as reduced to reflect expenses not incurred during a period of restoration) until the expiration of 24 months, with a 6-month extended period of indemnity. The "all-risk" policy containing terrorism insurance is required to contain a deductible that is acceptable to the lender and is no greater than \$25,000. However, if the Terrorism Risk Insurance Program Reauthorization Act of 2015 (TRIPRA) is no longer in effect, the borrower is not required to spend more than two times the then-current premium for a separate "all-risk" or equivalent policy (including business interruption coverage) for terrorism coverage (but is required to purchase the maximum coverage available for such amount). See *"Risk Factors—Terrorism Insurance May Not Be Available for All Mortgaged Properties"* in the Preliminary Prospectus.

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LOAN #7: 10000 SANTA MONICA BOULEVARD



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LOAN #7: 10000 SANTA MONICA BOULEVARD

Mortgaged Property Information	
Number of Mortgaged Properties	1
Location (City/State)	Los Angeles, California
Property Type	Multifamily
Size (Units)	281
Total Occupancy as of 4/9/2019	89.0%
Owned Occupancy as of 4/9/2019	89.0%
Year Built / Latest Renovation	2017 / N/A
Appraised Value	\$553,000,000
Appraisal Date	3/25/2019
Borrower Sponsor	Sonny Kahn, Russell Galbut and Bruce Menin
Property Management	CH Management Services, LLC
Underwritten Revenues	\$41,869,092
Underwritten Expenses	\$20,152,705
Underwritten Net Operating Income (NOI)	\$21,716,388
Underwritten Net Cash Flow (NCF)	\$21,660,188
Cut-off Date LTV Ratio ⁽¹⁾	39.8%
Maturity Date LTV Ratio ⁽¹⁾	39.8%
DSCR Based on Underwritten NOI / NCF ⁽¹⁾	2.35x / 2.34x
Debt Yield Based on Underwritten NOI / NCF ⁽¹⁾	9.9% / 9.8%

Mortgage Loan Information	
Loan Seller	
Cut-off Date Balance ⁽²⁾	
Cut-off Date Balance per Unit ⁽¹⁾	
Percentage of Initial Pool Balance	
Number of Related Mortgage Loans	
Type of Security	
Mortgage Rate	
Original Term to Maturity (Months)	
Original Amortization Term (Months)	
Original Interest Only Period (Months)	
First Payment Date	
Maturity Date	
	Escrows⁽³⁾
	Upfront
Taxes	\$890,641
Insurance	\$0
Replacement Reserve	\$0
TI/LC	\$0
Other	\$0

Sources and Uses

Sources	\$	%	Uses	\$
Loan Combination	\$220,000,000	62.9%	Payoff Existing Debt	\$339,715,633
Subordinate Debt	\$130,000,000	37.1	Closing Costs	1,738,818
			Reserves	890,641
			Return of Equity	7,654,907
Total Sources	\$350,000,000	100.0%	Total Uses	\$350,000,000

(1) Calculated based on the aggregate outstanding principal balance of the Senior Notes (as defined below).

The Cut-off Date Balance of \$50,000,000 represents the non-controlling notes A-3, A-4, and A-6, which are part of a loan combination evidenced by seven senior *pari passu* notes and one subordinate promissory note having an aggregate outstanding principal balance as of the Cut-off Date of \$350,000,000. See the "Loan Combination Summary" below for more information.

(3) See "Escrows" below.

The Mortgage Loan. The mortgage loan (the "**10000 Santa Monica Boulevard Loan**") is part of a loan combination (the "**10000 Santa Monica Boulevard Loan Combination**") originated by Natixis Real Estate Capital LLC ("**NREC**") evidenced by seven *pari passu* senior promissory notes with an aggregate outstanding principal balance of \$220.0 million (the "**Senior Notes**" or the "**A Notes**"), and one subordinate promissory note with an outstanding principal balance of \$130.0 million (the "**A-B Note**" and, together with the A Notes, the "**Notes**"), encumbering the 10000 Santa Monica Boulevard Borrower's fee simple interest in a 41-story, 281-unit, Class A high-rise residential tower located at 10000 Santa Monica Boulevard in Los Angeles, California (the "**10000 Santa Monica Boulevard Property**"). The 10000 Santa Monica Boulevard Loan is evidenced by three of the Senior Notes, Note A-3 in the outstanding principal amount of \$25.0 million, Note A-4 in the outstanding principal amount of \$20.0 million and Note A-6 in the outstanding principal amount of \$5.0 million, and represents approximately 4.2% of the Initial Pool Balance. The related companion loans (collectively, the "**10000 Santa Monica Boulevard Companion Loans**") are evidenced by \$170.0 million of Senior Notes (the "**Non-Trust A Notes**") and the A-B Note (the "**Non-Trust A-B Note**" or, collectively with the Non-Trust A Notes, the "**Non-Trust Notes**") and are expected to be contributed to one or more future securitizations. The 10000 Santa Monica Boulevard Loan Combination accrues interest at an interest rate of 4.15000% *per annum*. The 10000 Santa Monica Boulevard Borrower (as defined below) utilized proceeds of the 10000 Santa Monica Boulevard Loan Combination to pay off previously existing debt, fund reserves, pay closing costs and return equity to the 10000 Santa Monica Boulevard Borrower. The 10000 Santa Monica Boulevard Loan received a credit assessment of BBBsf by Fitch and AA by Morningstar.

Loan Combination Summary

Note	Original Balance	Cut-off Date Balance	Note Holder	Controlling Piece
A-1	\$100,000,000	\$100,000,000	NCMS 2019-10K	No
A-2	\$35,000,000	\$35,000,000	NREC	No
A-3, A-4, A-6	\$50,000,000	\$50,000,000	BMARK 2019-B12	No
A-5	\$15,000,000	\$15,000,000	NREC	No
A-7	\$20,000,000	\$20,000,000	NREC	No
A-B	\$130,000,000	\$130,000,000	NCMS 2019-10K	Yes
Total	\$350,000,000	\$350,000,000		

The 10000 Santa Monica Boulevard Loan Combination had an initial term of 120 months and has a remaining term of 117 months as of the Cut-off Date. The 10000 Santa Monica Boulevard Loan Combination requires monthly payments of interest only for the entire term of the 10000 Santa Monica Boulevard Loan. The scheduled maturity date of the 10000 Santa Monica Boulevard Loan Combination is the due date in May 2029. The 10000 Santa Monica Boulevard

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LOAN #7: 10000 SANTA MONICA BOULEVARD

Borrower generally has no right to prepay the 10000 Santa Monica Boulevard Loan Combination (except in certain instances of insured casualty or of condemnation); however, on or after February 6, 2029, the 10000 Santa Monica Boulevard Loan Combination is pre-payable in whole (but not in part), upon 30 days' prior notice, without penalty. The 10000 Santa Monica Boulevard Borrower has the right to defease the 10000 Santa Monica Boulevard Loan Combination in whole on any payment date after the date that is two years from the closing date of the securitization trust established in connection with the securitization of the final Notes to be securitized (the "**Defeasance Lockout Date**"), if no event of default is continuing and, upon satisfaction of certain other conditions enumerated in the loan agreement.

The Mortgaged Property. Built in 2017, the 10000 Santa Monica Boulevard Property is a 41-story, 281 unit, Class A residential tower located at 10000 Santa Monica Boulevard in Los Angeles, California. As of April 9, 2019, the 10000 Santa Monica Boulevard Property was 89.0% occupied, with a weighted average contract rent of \$13,013 per unit per month. The unit mix is comprised of six (2.1%) one-bedroom units, 258 (91.8%) two-bedroom units, 13 (4.6%) three-bedroom units, two (0.7%) four-bedroom units and two (0.7%) furnished penthouse units, totaling 468,123 SF of net rentable space.

The 10000 Santa Monica Boulevard Property is a modern all-glass structure composed of four crystalline quadrants crowned with an angled roof, maximizing the 10000 Santa Monica Boulevard Property's expansive views of the Pacific Ocean, downtown Los Angeles and the Hollywood Hills and giving it a distinctive appearance in the Los Angeles skyline. The 10000 Santa Monica Boulevard Property's abundant natural light and natural finishes combine to create seamless transitions between indoor and outdoor spaces and make the 10000 Santa Monica Boulevard Property a quintessential Los Angeles lifestyle property. The 10000 Santa Monica Boulevard Property's grand entrance, featuring twelve-foot Ice Blue Yellow-Wood hedges along a private drive from Santa Monica Boulevard, offers an enclave of privacy from the busy urban environment surrounding the 10000 Santa Monica Boulevard Property. The 10000 Santa Monica Boulevard Property has won numerous awards, including Los Angeles Architectural Award of Excellence (2017) from the Los Angeles Business Council and the Los Angeles Business Journal's 2017 Gold Award, Best Multi-Family Project.

The 10000 Santa Monica Boulevard Property features high-end amenities including over 75,000 SF of indoor and outdoor amenity spaces. Outdoor amenities include a private one-acre park, an outdoor heated pool with cabanas and poolside chaise lounges, an outdoor chef's kitchen with large Viking grills, a fire pit, a lighted tennis court, an outdoor theatre and a 2,000 SF dog run. Culture and entertainment amenities include a curated art collection on all amenity floors, including a commissioned art installation in the main lobby by Jacob Hashimoto, works by noted Los Angeles photographer Jeffrey Milstein and a collection of post-modern and contemporary works by Aaron Wexler, Adam Katseff and Suzan Etkins. The 10000 Santa Monica Boulevard Property includes a resident lounge with a full-service bar, separate private dining room and catering kitchen, a private screening room featuring sophisticated projection equipment, a four-screen video wall, a game room with gaming console and Ultra HD television with Apple TV, two fully-equipped glass-enclosed boardrooms, an indoor 75-foot lap pool with towel service and pool runners, exercise rooms with industry-leading personal trainers, spa treatment facilities, a rooftop terrace (for penthouse suites only) and a kid's studio. Unit amenities include 10-16' ceiling heights, floor-to-ceiling windows with silent, motorized window blinds, wide-plank hardwood flooring, custom Italian cabinetry, quartz countertops, premium European appliances, walk-in closets, and Ecobee3 smart Wi-Fi thermostats with hands-free temperature controls.

The 10000 Santa Monica Boulevard Property features personalized services provided by professionally trained house staff. Technology services include CHARLEY, a robot butler available to deliver mini-bar items directly to each residence, and a proprietary "app" for various functionalities, such as guest access, package notifications, community updates, rent payment, maintenance requests and amenity and service reservations. The house staff includes a 24-hour white glove doorman, a concierge, a valet service, an on-call personal chauffeur, personal attendants, a porter and a butler. In-house services include complimentary daily continental breakfast and cafe with full beverage menu in the lounge, a laundry and dry cleaning service, a private wait staff, personal shopping, housekeeping, a childcare service, car wash services, interior design consultants and a package delivery service.

The 10000 Santa Monica Boulevard Property received LEED Gold certification from the U.S. Green Building Council, the neighborhood's first multifamily high-rise to achieve this certification. The 10000 Santa Monica Boulevard Property was made of materials with a combined recycled content of over 20%. Its irrigation system, rain harvesting tanks and native flora allow the 10000 Santa Monica Boulevard Property to use 50% less water than comparable buildings.

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LOAN #7: 10000 SANTA MONICA BOULEVARD

The following table presents certain information relating to historical leasing at the 10000 Santa Monica Boulevard Property:

Historical Leased %⁽¹⁾

	1Q 2017	2Q 2017	3Q 2017	4Q 2017	1Q 2018	2Q 2018	3Q 2018	4Q 2018	As of 4/9/2019
Owned Space	14.5%	39.9%	56.2%	68.8%	79.5%	83.4%	87.5%	89.7%	89.0%

(1) Source: Historical Occupancy is the average of monthly physical occupancy as provided by the 10000 Santa Monica Boulevard Borrower. The development of the 10000 Santa Monica Boulevard Property was completed in early 2017 with lease-up commencing in January 2017.

■ **Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the 10000 Santa Monica Boulevard Property:

Cash Flow Analysis⁽¹⁾

	2017	2018	TTM 1/31/ 2019	Underwritten	Underwritten \$ per Unit
Base Rent	\$44,835,286	\$44,090,052	\$44,185,296	\$44,558,268	\$158,570.35
Gross Up Vacancy	0	0	0	0	0
Gross Potential Rent	\$44,835,286	\$44,090,052	\$44,185,296	\$44,558,268	\$158,570.35
Total Reimbursements	105,520	327,409	318,331	318,331	1,132.85
Vacancy & Credit Loss & Concessions	(28,006,280)	(8,284,550)	(7,622,593)	(6,333,314)	(22,538.48)
Total Rent	\$16,934,526	\$36,132,911	\$36,881,034	\$38,543,285	\$137,164.72
Other Income ⁽²⁾	1,312,248	3,245,302	3,325,807	3,325,807	11,835.61
Effective Gross Income	\$18,246,774	\$39,378,213	\$40,206,841	\$41,869,092	\$149,000.33
Real Estate Taxes	\$3,940,401	\$5,521,819	\$5,537,493	\$5,728,114	\$20,384.75
Insurance	481,583	541,888	551,303	622,570	2,215.55
Management Fee	559,633	1,192,752	1,217,565	1,256,073	4,470.01
Other Operating Expenses ⁽³⁾	10,703,005	12,649,319	12,691,875	12,545,948	44,647.50
Total Operating Expenses	\$15,684,622	\$19,905,778	\$19,998,236	\$20,152,705	\$71,717.81
Net Operating Income	\$2,562,152	\$19,472,435	\$20,208,605	\$21,716,388	\$77,282.52
Replacement Reserves	0	0	0	56,200	200.00
Net Cash Flow	\$2,562,152	\$19,472,435	\$20,208,605	\$21,660,188	\$77,082.52
Occupancy⁽⁴⁾	68.8%	89.7%	89.0%	88.5%	
NOI Debt Yield⁽⁵⁾	1.2%	8.9%	9.2%	9.9%	
NCF DSCR⁽⁵⁾	0.28x	2.10x	2.18x	2.34x	

Certain items such as straight line rent, interest expense, interest income, lease cancellation income, depreciation, amortization, debt service payments and any other non-recurring or non-operating items were excluded from the historical presentation and are not considered for the underwritten cash flow.

(2) Other Income includes RUBS, parking income, and late fees among others.

(3) Other Operating Expenses are inclusive of Club Services. The 10000 Santa Monica Boulevard Property's rental rates and the associated value are dependent in part on the availability and maintenance of the amenity space; accordingly, the costs of providing Club Services were considered in underwriting operating expenses. Club Services were underwritten based on the TTM 1/31/2019.

(4) 2017 and 2018 based on Q4 of each respective year. TTM 1/31/2019 occupancy based on Underwritten Rent Roll dated April 9, 2019.

(5) NOI Debt Yield and DSCR calculations are based on the aggregate outstanding balance of the Senior Notes.

■ **Appraisal.** According to the appraisal, the 10000 Santa Monica Boulevard Property had an "as-is" appraised value of \$553,000,000 as of March 25, 2019.

Appraisal Approach ⁽¹⁾	Value	Discount Rate	Capitalization Rate ⁽²⁾
Yield Capitalization	\$557,000,000	N/A	4.50%
Direct Capitalization	\$548,000,000	N/A	4.00%

(1) Based on the "as-is" appraised value.

(2) Represents the terminal cap rate.

- **Environmental Matters.** Based on Phase I environmental report dated March 27, 2019, the environmental consultant did not identify evidence of any recognized environmental conditions or recommendations for further action at the 10000 Santa Monica Boulevard Property.

- **Market Overview and Competition.** The 10000 Santa Monica Boulevard Property is located at the intersection of the Beverly Hills and Century City neighborhoods of Los Angeles, on the corner of Santa Monica Boulevard and Moreno Drive. Santa Monica Boulevard is one of the most trafficked east-west arterials through Los Angeles (22,200 cars per day near the 10000 Santa Monica Boulevard Property), connecting Santa Monica, West Los Angeles, Beverly Hills, West Hollywood and Hollywood. Nearby land is predominantly used for major high-rise office buildings, including the SunAmerica Tower, the Annenberg Foundation, Constellation Place (formerly MGM Tower) and 1900

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LOAN #7: 10000 SANTA MONICA BOULEVARD

Avenue of the Stars, with law firms, talent agencies and financial institutions making up the bulk of the tenancy. The 10000 Santa Monica Boulevard Property is within walking distance of some of the city's premier employers, including O'Melveny & Myers LLP, Creative Artists Agency, Morgan Stanley & Co. LLC, Sidley Austin LLP, Wells Fargo Advisors, McKinsey & Company, Bain & Company, Inc., UBS Investment Bank, Bloomberg and Natixis. With the presence of Cedars-Sinai Medical Center, the medical field, especially cosmetic surgery, is an important local employer and user of office space.

According to a third-party market research report, the 2019 average household income within a one-, three-, and five-mile radius of the 10000 Santa Monica Boulevard Property is \$157,431, \$116,732 and \$111,751, respectively. The 2019 estimated median owner-occupied housing values within a one-, three- and five-mile radius of the 10000 Santa Monica Boulevard Property are \$1,038,347, \$983,385 and \$991,411, respectively.

According to a third-party market research report, the 10000 Santa Monica Boulevard Property is located in the Los Angeles multifamily market, which has one of the highest rates of renter households of any U.S. metropolitan area, with approximately half of all households renting their homes. The current vacancy rate in the Los Angeles metropolitan area is 3.8%, the lowest rate recorded since 2001. According to a third-party market research report, the 10000 Santa Monica Boulevard Property is located within the Beverly Hills Submarket. As of fourth quarter 2018, the submarket contained 37,844 units with a reported vacancy rate of 3.8%, reflecting a decrease from the year-end 2017 vacancy of 4.2%. The submarket reported a 2018 average effective rent of \$2,906 per unit per month, increasing by 3.2% from year-end 2017. Through year 2018, the submarket delivered 222 units and absorbed 343 units. As of fourth quarter 2018, there were 1,670 units under construction in the Beverly Hills Submarket.

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LOAN #7: 10000 SANTA MONICA BOULEVARD

The following table presents certain information relating to the primary competition for the 10000 Santa Monica Boulevard Property:

Directly Competitive Buildings ⁽¹⁾

One-Bedroom – Rental Comparables

Property Name	Proximity (Miles)	Year Built	Avg. Unit Size	Asking Rent/Unit	Asking Rent/SF
8500 Burton	3.2	2012	1,015	\$6,514	\$6.42
1221 Ocean Avenue	8.6	1971	1,082	\$10,400	\$9.61
Wilshire Victoria	1.9	2010	1,283	\$7,662	\$5.97
Circa LA	9.2	2018	798	\$3,365	\$4.22
Atelier	12.9	2017	715	\$3,130	\$4.38
Vision on Wilshire	3.2	2018	855	\$5,329	\$6.23
The Argyle House	6.8	2018	871	\$4,995	\$5.73
Columbia Square	6.4	2016	752	\$4,755	\$6.32
10000 Santa Monica Boulevard Property (6 Units)⁽²⁾	N/A	2017	1,126	\$9,000	\$8.00

Two-Bedroom – Rental Comparables

Property Name	Proximity (Miles)	Year Built	Avg. Unit Size	Asking Rent/Unit	Asking Rent/SF
8500 Burton	3.2	2012	1,783	\$9,340	\$5.24
1221 Ocean Avenue	8.6	1971	1,742	\$13,100	\$7.52
Wilshire Victoria	1.9	2010	1,725	\$10,895	\$6.32
Circa LA	9.2	2018	1,602 - 2,288	\$5,751 - \$13,590	\$3.59 - \$5.94
Atelier	12.9	2017	1,126	\$5,630	\$5.00
Vision on Wilshire	3.2	2018	1,448	\$8,148	\$5.63
The Argyle House	6.8	2018	1,269	\$7,070	\$5.57
10000 Santa Monica Boulevard Property / Signature (241 Units)⁽²⁾	N/A	2017	1,599	\$11,514	\$7.20
10000 Santa Monica Boulevard Property / Estate (17 Units)⁽²⁾	N/A	2017	2,090	\$24,309	\$11.63

Three-Bedroom – Rental Comparables

Property Name	Proximity (Miles)	Year Built	Avg. Unit Size	Asking Rent/Unit	Asking Rent/SF
8500 Burton	3.2	2012	4,000	\$40,000	\$10.00
1221 Ocean Avenue	8.6	1971	1,679	\$27,100	\$16.14
Circa LA	9.2	2018	2,900 - 3,842	\$17,590 - \$23,515	\$6.07 - \$6.12
10000 Santa Monica Boulevard Property / Signature (5 Units)⁽²⁾	N/A	2017	1,982	\$21,000	\$10.59
10000 Santa Monica Boulevard Property / Estate (8 Units)⁽²⁾	N/A	2017	2,072	\$24,676	\$11.91

Four-Bedroom and Penthouse

Unit Type	Proximity (Miles)	Year Built	Avg. Unit Size	Asking Rent/Unit	Asking Rent/SF
10000 Santa Monica Boulevard Property / Four Bedroom (2 Units)⁽²⁾	N/A	2017	3,227	\$31,750	\$9.84
10000 Santa Monica Boulevard Property / Penthouse (2 Units)⁽²⁾	N/A	2017	3,755	\$57,750	\$15.38

(1) Source: Appraisal

(2) Avg. Unit Size, Asking Rent/Unit and Asking Rent/SF are based on April 9, 2019 underwritten rent roll.

The Borrower. The borrower for the 10000 Santa Monica Boulevard Loan Combination is SM 10000 Property, LLC, a Delaware limited liability company (the “**10000 Santa Monica Boulevard Borrower**”). The recourse carveout guarantors for the 10000 Santa Monica Boulevard Loan Combination are (i) Sonny Kahn, solely in his capacity as trustee of the SK Business Trust, a Florida Trust, (ii) Russell Galbut, solely in his capacity as trustee of the RF Business Trust, a Florida Trust, and (iii) Bruce A. Menin, solely in his capacity as trustee of the Menin 1998 Business Trust, a New York Trust. In the event that the trust for whom the applicable individual is acting as a trustee (each such individual, an “**10000 Santa Monica Boulevard Individual Guarantor**”) is voluntarily or involuntarily revoked, terminated or otherwise ceases to exist, then such 10000 Santa Monica Boulevard Individual Guarantor will be required to become a recourse carve-

out guarantor and personally liable under the 10000 Santa Monica Boulevard Loan documents. See “*Description of the Mortgage Pool – Non-Recourse Carveout Limitations*” for additional information.

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LOAN #7: 10000 SANTA MONICA BOULEVARD

- **Escrows.** The 10000 Santa Monica Boulevard Borrower deposited \$890,641 with the escrow agent for upfront tax reserves.

The 10000 Santa Monica Boulevard Borrower is required to pay to the lender on each payment date (i) 1/12th of the taxes and other charges that lender estimates will be payable during the next 12 months in order to accumulate with lender sufficient funds to pay all such taxes and other charges at least 30 days prior to their respective due dates and (ii) 1/12th of the insurance premiums that lender estimates will be payable for the renewal of the coverage afforded by the policies upon the expiration thereof in order to accumulate with lender sufficient funds to pay all such insurance premiums at least 30 days prior to the expiration of the policies.

However, provided that (i) no event of default is continuing and (ii) the 10000 Santa Monica Boulevard Borrower has provided lender with evidence reasonably satisfactory to the lender that any insurance required to be maintained by the 10000 Santa Monica Boulevard Borrower is effected under a blanket policy reasonably acceptable to the lender, the 10000 Santa Monica Boulevard Borrower will not be required to make monthly deposits for insurance premiums.

The 10000 Santa Monica Boulevard Borrower is required to pay to the lender on each payment date an amount initially equal to \$6,814 for replacements, capital expenditures and repairs required to be made to the 10000 Santa Monica Boulevard Property during the calendar year. The amount of funds in the capital expense reserve at any given time may not (1) exceed \$250,000 in the aggregate and (2) be less than \$81,711 in the aggregate.

- **Lockbox and Cash Management.** The 10000 Santa Monica Boulevard Loan Combination is structured with a soft lockbox and in-place cash management. At origination, the 10000 Santa Monica Boulevard Borrower established an eligible account (the "**Lockbox Account**") into which income from the 10000 Santa Monica Boulevard Property is required to be deposited. The 10000 Santa Monica Boulevard Borrower is required (and is required to cause the 10000 Santa Monica Boulevard Manager (as defined below)) to, deposit all amounts received by the 10000 Santa Monica Boulevard Borrower or 10000 Santa Monica Boulevard Manager constituting rents into the Lockbox Account within two business days after receipt. The lender has been granted a first priority security interest in the Lockbox Account (except for any funds collected by the 10000 Santa Monica Boulevard Borrower for and on behalf of the private club operating at the 10000 Santa Monica Boulevard Property while no event of default is continuing and the Club Lease (as defined below) is in effect). Notwithstanding the foregoing, to the extent the club collects any revenues on behalf of the 10000 Santa Monica Boulevard Borrower for services at the 10000 Santa Monica Boulevard Property (such as housekeeping and laundry services), the 10000 Santa Monica Boulevard Loan Combination documents provide that such amounts may be held by the club until a monthly reconciliation is made between the 10000 Santa Monica Boulevard Borrower and the club operator. Following any such reconciliation, the club operator is required to deliver such amounts to the Lockbox Account.

On each business day, all funds on deposit in the Lockbox Account (except for the required minimum balance) are required to be transferred to an eligible account established by lender (the "**Cash Management Account**") and applied in accordance with the priority of payments set forth below. The lender has been granted a first priority security interest in the Cash Management Account (except for any funds collected by the 10000 Santa Monica Boulevard Borrower for and on behalf of the club while no event of default is continuing and the Club Lease is in effect).

On each payment date, all funds on deposit in the Cash Management Account are required to be applied in accordance with the 10000 Santa Monica Boulevard Loan Combination documents. To the extent there is a Cash Sweep Period (as defined below) continuing, all amounts following payment of debt service, required reserves and operating expenses are required to be held in an excess cash flow account as additional collateral for the 10000 Santa Monica Boulevard Loan Combination (unless the Cash Sweep Period is caused solely by a Debt Yield Trigger Event, in which case the lender is required to apply such funds to the monthly deposits for taxes and insurance to the extent not otherwise funded). All funds on deposit in the Cash Management Account during an event of default may be applied by lender in such order and priority as lender determines.

A "**Cash Sweep Period**" will (i) commence upon the occurrence of (a) an event of default, (b) any bankruptcy action of the 10000 Santa Monica Boulevard Borrower or 10000 Santa Monica Boulevard Manager, (c) a Debt Yield Trigger Event (as defined below), (d) a Club Revenues Trigger Event (as defined below), or (e) a Short-Term Lease Excess Event (as defined below); and will (ii) end upon (a) with respect to an event of default, such event of default no longer continuing, (b) with respect to a bankruptcy action of the 10000 Santa Monica Boulevard Manager, if such bankruptcy action is involuntary, such action is discharged or dismissed, or if the 10000 Santa Monica Boulevard Borrower

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LOAN #7: 10000 SANTA MONICA BOULEVARD

replaces the 10000 Santa Monica Boulevard Manager with a qualified manager in accordance with the 10000 Santa Monica Boulevard Loan Combination documents, (c) with respect to a Debt Yield Trigger Event, the achievement of a debt yield of at least 5.75% for two consecutive calendar quarters based on the trailing 12 months, (d) with respect to a Club Revenues Trigger Event, the achievement of a Club Revenues Debt Yield of 5.30% or higher for two consecutive calendar quarters based upon the trailing twelve month period, or (e) with respect to a Short-Term Lease Excess Event, the aggregate of annualized actual in place rents under short-term leases and month-to-month leases is less than 22% of the aggregate annualized actual in place rents from the 10000 Santa Monica Boulevard Property as of the first day of each of two consecutive calendar quarters.

A “**Debt Yield Trigger Event**” means a debt yield of less than 5.75% on any date of determination for the calendar quarter immediately preceding the date of such determination, based upon the trailing twelve month period immediately preceding such date of determination, as determined by the lender in its sole but good faith discretion.

A “**Club Revenues Trigger Event**” means a debt yield (recalculated on a pro-forma basis by adding to the numerator an amount equal to the positive or negative club net operating income during the trailing twelve (12) month period) (the “**Club Revenues Debt Yield**”) of less than 5.30% on any date of determination for the calendar quarter immediately preceding the date of such determination, based upon the trailing 12-month period immediately preceding such date of determination, as determined by the lender in its sole but good faith discretion.

A “**Short-Term Lease Excess Event**” means the occurrence of each of the following: (1) the aggregate of annualized actual in place rents under short-term leases (i.e., leases with an initial term of less than six months) and month-to-month leases (i.e., leases with an initial term of greater than six months that has expired, with the tenant remaining in occupancy on a month-to-month basis) exceeds 22% of the aggregate annualized actual in place rents from the 10000 Santa Monica Boulevard Property as of the first day of any calendar quarter, (2) the 10000 Santa Monica Boulevard Borrower enters into at least one short-term lease on or after such first day of such calendar quarter, and (3) the aggregate of annualized actual in place rents under short-term leases and month-to-month leases again exceeds 22% of the aggregate annualized actual in place rents from the 10000 Santa Monica Boulevard Property as of the first day of the next succeeding calendar quarter.

Property Management. The 10000 Santa Monica Boulevard Property is managed by CH Management Services, LLC (the “**10000 Santa Monica Boulevard Manager**”), an affiliate of the 10000 Santa Monica Boulevard Borrower, under a management agreement which commenced on January 16, 2019 (the “**Management Agreement**”), and will continue until terminated by the 10000 Santa Monica Boulevard Borrower or the 10000 Santa Monica Boulevard Manager in its sole and absolute discretion. The management fee is 3.0% of gross revenues from the 10000 Santa Monica Boulevard Property. The parking garage is also managed by a sponsor affiliate, CH Parking, LLC, who, per the parking management agreement, receives a management fee of \$2,500 per month. The lender may require the 10000 Santa Monica Boulevard Borrower to terminate the Management Agreement and replace the 10000 Santa Monica Boulevard Manager in accordance with the terms of the 10000 Santa Monica Boulevard Loan documents pursuant to a replacement Management Agreement, if (a) an event of default under the 10000 Santa Monica Boulevard Loan documents has occurred and remains uncured, (b) the 10000 Santa Monica Boulevard Manager becomes insolvent or a debtor in any bankruptcy or insolvency proceeding (unless, in the case of an involuntary bankruptcy filing only that was not consented to by the 10000 Santa Monica Boulevard Manager, if such petition is not dismissed within 60 days of filing), (c) a material default by the 10000 Santa Monica Boulevard Manager occurs under the Management Agreement and continues beyond applicable cure periods or (d) a change in control of the 10000 Santa Monica Boulevard Manager.

Club Lease. The amenity space at the 10000 Santa Monica Boulevard Property is operated by an affiliate of the 10000 Santa Monica Boulevard Borrower, pursuant to a lease between the 10000 Santa Monica Boulevard Borrower and such affiliate (the “**Club Lease**”). The initial term of the Club Lease expires on December 31, 2019, and automatically renews on a year-to-year basis unless either party elects not to renew. The operating lessee also holds the liquor license for the 10000 Santa Monica Boulevard Property. The 10000 Santa Monica Boulevard Borrower has assigned its rights under the Club Lease to the lender, and the operating lessee has subordinated its rights arising from the Club Lease to the lender’s security interests under the loan documents. Upon foreclosure, the lender can terminate the Club Lease and the operating lessee has agreed to attorn to the lender (or other purchaser in foreclosure). In addition, there is a cooperation agreement between the 10000 Santa Monica Boulevard Borrower, the operating lessee and the lender by which the liquor license can be more easily transferred to the lender. The amenity space currently operates at a loss exceeding \$100,000 per month.

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LOAN #7: 10000 SANTA MONICA BOULEVARD

Current Mezzanine or Subordinate Indebtedness. Concurrently with the funding of the 10000 Santa Monica Boulevard Loan, NREC funded a subordinate loan in the amount of \$130.0 million, evidenced by the Non-Trust A-B note, to the 10000 Santa Monica Boulevard Borrower. The Non-Trust A-B Note was securitized in the NCMS 2019-10K transaction.

- The Non-Trust A-B Note carries an interest rate of 4.15000% *per annum* and is co-terminus with the 10000 Santa Monica Boulevard Loan. The 10000 Santa Monica Boulevard Combination Loan is subject to a co-lender agreement. Based on the total combined debt of \$350.0 million, the Cut-off Date LTV Ratio, Maturity Date LTV Ratio, DSCR Based on Underwritten NCF and Debt Yield Based on Underwritten NOI are illustrated below:

Financial Information

	<u>10000 Santa Monica Boulevard Senior Notes</u>	<u>10000 Santa Monica Boulevard Loan Combination</u>
Cut-off Date Balance	\$220,000,000	\$350,000,000
Cut-off Date LTV Ratio	39.8%	63.3%
Maturity Date LTV Ratio	39.8%	63.3%
DSCR Based on Underwritten NCF	2.34x	1.47x
Debt Yield Based on Underwritten NOI	9.9%	6.2%

- **Future Mezzanine or Subordinate Indebtedness.** Not permitted.
- **Release of Collateral.** Not permitted.

Terrorism Insurance. The 10000 Santa Monica Boulevard Borrower, at its sole cost, is required to obtain and maintain comprehensive “all-risk” or “special form” insurance that includes, but is not limited to, loss caused by any type of windstorm or hail on the improvements and the personal property, in an amount equal to 100% of the actual replacement value (exclusive of costs of excavations, foundations, underground utilities and footings) with a waiver of depreciation, with a deductible that may not exceed \$50,000. The 10000 Santa Monica Boulevard Loan Combination documents

- also require business income insurance on an actual loss sustained basis with no time limitation, commencing at the time of casualty, together with a 12-month extended period of indemnity. The property and business income insurance described above are required to cover losses resulting from perils and acts of terrorism on terms (including amounts) consistent with those required under the 10000 Santa Monica Boulevard Loan Combination documents. See “*Risk Factors—Terrorism Insurance May Not Be Available for All Mortgaged Properties*” in the Preliminary Prospectus.

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LOAN #8: 3 COLUMBUS CIRCLE



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LOAN #8: 3 COLUMBUS CIRCLE

26	Josephson 11,371 SF Exp. 12/2032							
25	Josephson 11,371 SF Exp. 12/2032							
24	Cohen and Company LLC 11,186 SF Exp. 2/2029				Weld North LLC 4,988 SF Exp. 10/2023		Belovfine Ltd. 5,423 SF Exp. 3/2028	
23	Vacant 11,920 SF					Vacant 9,306 SF		
22	The Juillard School 5,789 SF Exp. 3/2025		The Juillard School 2229 5,789 SF Exp. 3/2025		683 Capital Management 3,574 SF Exp. 11/2021	Harvard Business School 4,855 SF Exp. 2/2024	Lagoda Investment 3,091 SF Exp. 5/2020	
21	TenCore Partners 3,874 SF Exp. 2/2024	Nova Ventures, LLC 3,849 SF Exp. 1/2029	Cefe Infrastructure Inv 3,057 SF Exp. 7/2023		Benfolio Group LLC 5,789 SF Exp. 7/2024		Mediant Communications 4,885 SF Exp. 11/2021	
20	Versace USA, LLC 21,342 SF Exp. 7/2025							
19	Young & Rubicam, Inc. 21,315 SF Exp. 8/2033							
18	Young & Rubicam, Inc. 34,177 SF Exp. 8/2033							
17	Column Park Asset Mgt 3,240 SF Exp. 12/2020	Genova Energy Markets 4,480 SF Exp. 5/2021	Aralaz Pharmaceuticals 4,081 SF Exp. 10/2020	Tokai Tokyo Securities 2,964 SF Exp. 8/2022	PS Broadway Holdings 4,445 SF Exp. 8/2020	XBTOPPS Expansion 4,100 SF Exp. 5/2023	B2 Finance 5,933 SF Exp. 5/2025	XBTOPPS LLC 4,898 SF Exp. 12/2022
16	Emerge 212 3CC LLC 23,917 SF Exp. 11/2027						Laura & John Arnold 9,708 SF Exp. 7/2025	
15	Emerge 212 3CC LLC 33,442 SF Exp. 11/2027							
14	Northern Pacific Growth Inv. 4,407 SF Exp. 12/2021	KG Funds Management LLC 3,798 SF Exp. 8/2020	Clayton Family Office 1,719 SF Exp. 11/2021	Dr. Joshua Levine, MD PC 2,130 SF Exp. 2/2023	Building Office 2,831 SF	Trustees of Columbia 14,162 SF Exp. 8/2025		KIFO USA 6,190 SF Exp. 7/2026
12	Jazz at Lincoln Center, Inc. 30,653 SF Exp. 4/2028						TFO USA 4,052 SF Exp. 5/2023	
11	Young & Rubicam, Inc. 34,634 SF Exp. 8/2033							
10	Young & Rubicam, Inc. 34,634 SF Exp. 8/2033							
9	Young & Rubicam, Inc. 34,634 SF Exp. 8/2033							
8	Young & Rubicam, Inc. 34,634 SF Exp. 8/2033							
7	Young & Rubicam, Inc. 34,634 SF Exp. 8/2033							
6	Young & Rubicam, Inc. 34,634 SF Exp. 8/2033							
5	Young & Rubicam, Inc. 34,634 SF Exp. 8/2033							
4	Young & Rubicam, Inc. 34,634 SF Exp. 8/2033							
3	Young & Rubicam, Inc. 41,202 SF Exp. 8/2033							
2	CVS Caremark Pharmacy 13,143 SF Exp. 7/2028				Nordstrom 15,556 SF Exp. 10/2039			
Ground	Nordstrom 12,552 SF Exp. 10/2039				CVS Caremark Pharmacy 6,339 SF Exp. 7/2028		Chase Bank 6,551 SF Exp. 8/2031	
Basement	Nordstrom 18,883 SF Exp. 10/2039				CVS Caremark Pharmacy 1,677 SF Exp. 7/2028	Building Storage 3,021 SF	Young & Rubicam, Inc. Storage 1,300 SF Exp. 5/2033	Young & Rubicam, Inc. Storage 170 SF Exp. 8/2033

Vacant Building 2019 – 2021 2022 – 2023 2024 – 2025 2026+

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LOAN #8: 3 COLUMBUS CIRCLE



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interest at an interest rate of 3.91400% *per annum*, was originated by JPMorgan Chase Bank, National Association (“**JPMCB**”) on March 12, 2019, had an original principal balance of \$595,000,000 and has an outstanding principal balance as of the Cut-off Date of \$595,000,000. Notes A-2-1, A-2-2, A-2-3, A-2-4, A-2-5-A, A-2-5-B and B-2 were sold to Deutsche Bank AG, New York Branch and then subsequently assigned to German American Capital Corporation (“**GACC**”) on March 13, 2019. Additionally, Note A-1-3 was sold to Deutsche Bank AG, New York Branch and then subsequently assigned to GACC in connection with the BMARK 2019-B11 transaction. The proceeds of the 3 Columbus Circle Loan Combination along with the principal’s new cash contribution were primarily used to refinance prior debt secured the 3 Columbus Circle Property, repurchase Young & Rubicam’s condominium interest, pay origination costs and fund upfront reserves. The 3 Columbus Circle Loan received a credit assessment of BBB-*sf* by Fitch and A- by Morningstar. S&P confirmed that the 3 Columbus Circle Loan exhibits credit characteristics that are consistent with investment grade credit.

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LOAN #8: 3 COLUMBUS CIRCLE

Loan Combination Summary

Note	Original Balance	Cut-off Date Balance	Note Holder	Controlling Piece
Note A-1-1	\$50,000,000	\$50,000,000	Benchmark 2019-B10	No
Note A-1-2-A	50,000,000	50,000,000	JPMCC 2019-COR5	No
Note A-1-2-B, A-1-7	50,000,000	50,000,000	Benchmark 2019-B12	No
Note A-1-3	75,000,000	75,000,000	Benchmark 2019-B11	No
Note A-1-4	40,000,000	40,000,000	JPMCB ⁽¹⁾	No
Note A-1-5	50,000,000	50,000,000	CSAIL 2019-C16	No
Note A-1-6	35,000,000	35,000,000	JPMCB ⁽¹⁾	No
Note A-1-8	17,500,000	17,500,000	JPMCB ⁽¹⁾	No
Note A-2-1	25,000,000	25,000,000	Benchmark 2019-B10	No
Note A-2-2	25,000,000	25,000,000	CF 2019-C1	No
Note A-2-3	25,000,000	25,000,000	CF 2019-C1	No
Note A-2-4	25,000,000	25,000,000	Benchmark 2019-B11	No
Note A-2-5-A	12,500,000	12,500,000	DBNY ⁽¹⁾	No
Note A-2-5-B	10,000,000	10,000,000	MSC 2019-H6	No
Note B-1	51,450,000	51,450,000	Benchmark 2019-B10	Yes ⁽²⁾
Note B-2	53,550,000	53,550,000	Benchmark 2019-B10	No
Total / Wtd. Avg.	\$595,000,000	\$595,000,000		

(1) Expected to be contributed to one or more future securitization transactions.

The holder of the 3 Columbus Circle Note B-1 will have the right to appoint the special servicer of the 3 Columbus Circle Loan Combination and to direct certain decisions with respect to 3 Columbus Circle Loan Combination, unless a control appraisal event exists under the related co-lender agreement; after the occurrence of a control appraisal event with respect to the 3 Columbus Circle Note B-1, the holder of the 3 Columbus Circle Note A-1-1 will have such rights. The 3 Columbus Circle Loan Combination will be serviced pursuant to the pooling and servicing agreement for the Benchmark 2019-B10 securitization.

The 3 Columbus Circle Loan Combination had an initial term of 120 months, has a remaining term of 115 months as of the Cut-off Date and requires monthly payments of interest only for the term of the 3 Columbus Circle Loan Combination. The scheduled maturity date of the 3 Columbus Circle Loan Combination is the due date in March 2029. Provided no event of default has occurred and is continuing, at any time after the earlier to occur of (i) April 11, 2022 and (ii) the second anniversary of the last securitization of a note comprising part of the 3 Columbus Circle Loan Combination, the 3 Columbus Circle Loan Combination may be defeased with certain direct full faith and credit obligations of the United States of America or other obligations which are “government securities” permitted under the 3 Columbus Circle Loan Combination documents. Voluntary prepayment of the 3 Columbus Circle Loan Combination is permitted on or after the due date in November 2028 without payment of any prepayment premium.

The Mortgaged Property. The 3 Columbus Circle Property is a Class A, 26-story, 753,713 square foot office building with ground floor retail located in the Midtown neighborhood of Manhattan, New York. The 3 Columbus Circle Property occupies the entire city block bounded by Broadway, Eighth Avenue, West 57th Street and West 58th Street, and features panoramic views of Central Park, the Hudson River and New York City. The 3 Columbus Circle Property serves as the national headquarters for its largest tenant, Young & Rubicam, Inc. (“**Young & Rubicam**”) (49.8% of net rentable area; rated BBB+/BBB by Fitch and S&P), and approximately 72.0% and 78.8% of net rentable area and underwritten base rent, respectively, is leased to investment grade tenants, including Nordstrom’s first men’s store in Manhattan, CVS Pharmacy, Chase Bank, Versace and AT&T.

The 3 Columbus Circle Property’s bottom five floors were originally constructed in 1904 and underwent a 22-story expansion by Shreve, Lamb and Harmon in 1927, the architectural firm behind the Empire State Building. From 2010 to 2013, the 3 Columbus Circle Property underwent an approximately \$82.5 million building-wide renovation, including an approximately \$44.0 million energy-efficient glass façade surrounding the building’s original foundation. In addition to the façade, the lobby received an approximately \$1.0 million expansion and renovation that widened the existing entrance on Broadway and replaced the existing lobby walls with 12-foot glass walls. The retail space received approximately \$3.0 million in capital improvements, including floor-to-ceiling windows and fully redesigned restrooms. The 3 Columbus Circle Property features modern building systems, 12 passenger elevators, a loading dock and office terraces on multiple floors. The 3 Columbus Circle Property has earned Energy Star designation and LEED Silver certification.

The Moinian Group (“**Moinian**”) acquired the 3 Columbus Circle Property in 2004 for approximately \$250 million. In 2011, when the building was 33.3% occupied, Moinian sold a 48.9% interest in the building to SL Green, and

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together, the companies began an extensive multi-year redevelopment plan to reposition the building to a Class A asset. In 2012, while the redevelopment was underway, a 214,372 square foot condominium interest which covers floors three to eight was sold to Young & Rubicam for approximately \$143.6 million. Renovations were completed in 2013 and the 3 Columbus Circle Property was leased up to 97.2% as of January 1, 2019. In 2018, Moinian repurchased SL Green's interest in the 3 Columbus Circle Property for \$227.5 million and, in conjunction with the closing of the 3 Columbus Circle Loan Combination, Moinian repurchased Young & Rubicam's condominium interest for \$215.6 million. In conjunction with repurchase of the Young & Rubicam condominium interest, a new lease to Young & Rubicam was simultaneously executed with an initial base rent of \$76.00 per square foot and a lease expiration of July 2033.

As of January 1, 2019, the 3 Columbus Circle Property was 97.2% leased to a diversified roster of 40 tenants, including a mix of 32 office tenants, five telecom tenants and three investment grade rated retail tenants. The 3 Columbus Circle Property's ten largest tenants occupy approximately 610,518 square feet (81.0% of net rentable area) and have a weighted average remaining lease term of approximately 13.0 years.

The largest tenant, Young & Rubicam (375,236 square feet; 49.8% of NRA; 39.9% of Underwritten Base Rent), a subsidiary of WPP (LSE: WPP) (rated BBB+/BBB by Fitch and S&P), is a marketing and communications company specializing in advertising, digital and social media, sales promotion, direct marketing and brand identity consulting. Young & Rubicam's clients include a variety of companies including Campbell's Soup Company, Colgate-Palmolive, Virgin Atlantic, Revlon, LG and Land Rover. Founded in 1923 and headquartered at the 3 Columbus Circle Property, Young & Rubicam has more than 190 offices in 95 countries. WPP is a global company in communications, commerce and technology services with over 150 subsidiaries. As of 2017, WPP reported £15.3 billion in revenue. Young & Rubicam has been in occupancy of the 3 Columbus Circle Property since 2012 and currently occupies floors 9, 10, 11, 18 and 19 through August 2033 and floors three through eight through July 2033, both with two ten-year renewal options.

The second largest tenant, Emerge 212 3CC LLC (57,359 square feet; 7.6% of NRA; 4.7% of Underwritten Base Rent) ("**Emerge212**"), a subsidiary of SL Green Realty Corp. (NYSE: SLG) (rated Baa3/BBB/BBB- by Moody's, Fitch and S&P), was founded in 1999 and is an operator of full-service office suites. Emerge212 provides fully-furnished, privately leased, flexible office space, providing tenants the ability to grow and contract along with business needs. In addition to office space, tenants receive full-service amenities such as cafe areas, charging stations, conference rooms and event space. Emerge212 is located exclusively in New York with locations at 3 Columbus Circle, 125 Park Avenue and 1185 Avenue of the Americas. SL Green Realty Corp. is a self-managed real estate investment trust and a large commercial landlord in New York City. As of 2017, SL Green Corp. reported approximately \$1.5 billion in total revenue and approximately \$14.0 billion in total assets. Emerge212 has been a tenant at the property since 2013, currently occupies floors 15 and 16 through November 2027 and licenses its space as shared workspace.

The third largest tenant, Nordstrom (46,991 square feet; 6.2% of NRA; 19.6% of U/W Base Rent) (rated Baa1/BBB+/BBB+ by Moody's, Fitch and S&P) (NYSE: JWN), is one of the nation's largest upscale apparel and shoe retailers, serving customers through multiple retail channels, discount stores, boutiques, catalogs and the Internet. The store at the 3 Columbus Circle Property serves as Nordstrom's first men's store and its first store in Manhattan. Nordstrom is expected to open its flagship women's store across the street at Central Park Tower in fall 2019. In addition to its online business which reaches 96 countries, Nordstrom operates 379 U.S. stores in 40 states, as well as six Nordstrom stores in Canada. As of fiscal year ended February 3, 2018, Nordstrom reported approximately \$15.1 billion in net sales and approximately \$8.1 billion in total assets. Nordstrom occupies the largest retail space on the ground floor, as well as space on the second floor, through October 2039 and has two ten-year renewal options.

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The following table presents certain information relating to the tenants at the 3 Columbus Circle Property:

Ten Largest Owned Tenants by Tenant GLA⁽¹⁾

Tenant Name	Type	Credit Rating (Fitch/MIS/ S&P) ⁽²⁾	Tenant GLA	% of Owned GLA	UW Base Rent ⁽³⁾	% of Total UW Base Rent ⁽³⁾	UW Base Rent \$ per SF ⁽³⁾	Lease Expiration	Renewal / Extension Options
Young & Rubicam, Inc. ⁽⁴⁾	Office	BBB+/NR/BBB	375,236	49.8%	\$27,040,366	39.9%	\$72.06	7/31/2033	2, 10-Year
Emerge 212 3CC LLC	Office	BBB/Baa3/BBB-	57,359	7.6	3,154,745	4.7	\$55.00	11/30/2027	None
Nordstrom ⁽⁵⁾	Retail	BBB+/Baa1/BBB+	46,991	6.2	13,258,518	19.6	\$282.15	10/31/2039	2, 10-Year
Jazz at Lincoln Center, Inc.	Office	NR/NR/NR	30,653	4.1	1,593,956	2.4	\$52.00	4/30/2028	1, 5-Year
Josephson ⁽⁶⁾	Office	NR/NR/NR	22,742	3.0	2,274,200	3.4	\$100.00	12/31/2032	1, 5-Year
Versace USA, Inc.	Office	BBB-/NR/BBB-	21,342	2.8	1,600,650	2.4	\$75.00	7/31/2025	1, 5-Year
CVS Caremark Pharmacy	Retail	NR/Baa2/BBB	21,159	2.8	4,087,919	6.0	\$193.20	7/31/2028	1, 10-Year
Trustees of Columbia ⁽⁷⁾	Office	NR/Aaa/AAA	14,162	1.9	1,101,323	1.6	\$77.77	8/31/2025	None
Cohen and Company LLC	Office	NR/NR/NR	11,166	1.5	926,778	1.4	\$83.00	2/28/2029	1, 5-Year
Laura & John Arnold ⁽⁸⁾	Office	NR/NR/NR	9,708	1.3	543,648	0.8	\$56.00	7/31/2025	None
Total Major Office and Retail			610,518	81.0%	\$55,582,102	82.0%	\$91.04		
Other Occupied Office and Retail ⁽⁹⁾			121,646	16.1	12,090,370	17.8	\$99.39		
Total Occupied Office and Retail			732,164	97.1%	\$67,672,472	99.9%	\$92.43		
Telecom			218	0.1	71,510	0.1	\$328.03		
Total Occupied			732,382	97.2%	\$67,743,982	100.0%	\$92.50		
Vacant ⁽¹⁰⁾			21,331	2.8					
Total			753,713	100.0%					

(1) Based on the underwritten rent roll dated January 1, 2019.

(2) In certain instances, ratings provided are those of the parent company of the entity shown, whether or not the parent company guarantees the lease.

(3) UW Base Rent, % of Total UW Base Rent and UW Base Rent \$ per SF includes rent steps through January 2020 and average rent over the loan term for investment grade tenants, including Young & Rubicam, Inc., Emerge 212 3CC LLC, Nordstrom, CVS Caremark Pharmacy, Chase Bank, Trustees of Columbia and AT&T Corp.

(4) Young & Rubicam, Inc. leases 375,236 square feet, of which (i) 214,372 square feet is leased for \$76.00 per square foot and is set to expire July 2033, (ii) 124,760 square feet is leased for \$68.60 per square foot and is set to expire August 2033, (iii) 34,634 square feet is leased for \$62.00 per square foot and is set to expire in August 2033 and (iv) 1,300 square feet is leased for \$32.50 per square foot and is set to expire in August 2033.

(5) Nordstrom leases 46,991 square feet, of which (i) 43,018 square feet is leased for \$241.25 per square foot and (ii) 3,973 square feet is leased for \$725.00 per square foot.

(6) Josephson is an affiliate of the borrowers and its leased space serves as headquarters for affiliates of the borrowers.

(7) Trustees of Columbia leases 14,162 square feet, of which (i) 6,031 square feet is leased for \$76.53 per square foot, (ii) 5,020 square feet is leased for \$78.79 per square foot and (iii) 3,111 square feet is leased for \$78.51 per square foot.

(8) Laura & John Arnold has the right to cancel its lease at the end of any month occurring between March 1, 2020 and March 1, 2023, with no less than nine months' prior notice and the payment of a termination fee.

(9) Other Occupied Office and Retail is inclusive of a 2,831 square foot management office with no attributable underwritten base rent. Subleases account for 20,015 square feet (2.7% of net rentable area).

(10) Vacant space includes 21,231 square feet of office space and 100 square feet of storage space.

The following table presents certain information relating to the lease rollover schedule at the 3 Columbus Circle Property, based on initial lease expiration dates:

Lease Expiration Schedule⁽¹⁾⁽²⁾

Year Ending December 31	Expiring Owned GLA	% of Owned GLA	Cumulative % of Owned GLA	UW Base Rent	% of Total UW Base Rent ⁽²⁾	UW Base Rent \$ per SF ⁽²⁾	# of Expiring Leases
MTM	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2019	0	0.0%	0.0%	0	0.0%	\$0.00	0
2020	18,655	2.5%	2.5%	1,463,746	2.2%	\$78.46	5
2021	19,013	2.5%	5.0%	1,584,749	2.3%	\$83.35	5
2022	7,861	1.0%	6.0%	686,928	1.0%	\$87.38	3
2023	18,327	2.4%	8.5%	1,483,170	2.2%	\$80.93	5
2024	14,518	1.9%	10.4%	1,201,163	1.8%	\$82.74	3
2025	60,820	8.1%	18.5%	4,494,341	6.6%	\$73.90	5
2026	6,190	0.8%	19.3%	520,827	0.8%	\$84.14	1

2027	57,359	7.6%	26.9%	3,154,745	4.7%	\$55.00	1
2028	57,235	7.6%	34.5%	6,142,196	9.1%	\$107.32	3
2029 & Thereafter ⁽³⁾	472,404	62.7%	97.2%	47,012,117	69.4%	\$99.52	13
Vacant	21,331	2.8	100.0%	0	0.0%	\$0.00	0
Total / Wtd. Avg.	753,713	100.0%		\$67,743,982	100.0%	\$89.88	44

- (1) Based on the underwritten rent roll dated January 1, 2019.
- (2) Certain tenants may have termination or contraction options (which may become exercisable prior to the originally stated expiration date of the tenant lease) that are not considered in the above Lease Rollover Schedule.
- (3) 2029 & Thereafter is inclusive of a 2,831 square foot management office and a 3,021 square foot storage space that have no underwritten rent.

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The following table presents certain information relating to historical leasing at the 3 Columbus Circle Property:

Historical Leased%(¹)

	2016	2017	2018	As of 1/1/ 2019(²)
3 Columbus Circle	98.4%	91.9%	98.0%	97.2%

(1) Historical occupancies are as of December 31 of each respective year.

(2) Based on the underwritten rent roll dated January 1, 2019.

- Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the 3 Columbus Circle Property:

Cash Flow Analysis(¹)

	2016	2017	2018	Underwritten	Underwritten \$ per SF
Base Rent(²)	\$41,873,116	\$43,763,738	\$48,360,889	\$67,743,982	\$89.88
Straight Line Rent(²)	0	0	0	4,169,665	5.53
Vacant Income	0	0	0	1,977,018	2.62
Gross Potential Rent	\$41,873,116	\$43,763,738	\$48,360,889	\$73,890,665	\$98.04
Total Reimbursements	\$2,954,447	\$3,436,707	\$4,969,121	\$7,102,216	\$9.42
Total Other Income(³)	5,333,639	3,752,429	3,994,225	10,130	0.01
Vacancy & Credit Loss	0	0	0	(1,587,003)	(2.11)
Effective Gross Income	\$50,161,202	\$50,952,874	\$57,324,235	\$79,416,007	\$105.37
Real Estate Taxes	\$7,501,806	\$8,502,456	\$9,456,522	\$10,108,056	\$13.41
Insurance	261,571	279,400	340,532	401,028	0.53
Management Fee	200,000	200,000	200,000	1,000,000	1.33
Other Operating Expenses	7,005,275	7,272,268	7,236,146	7,409,471	9.83
Total Operating Expenses	\$14,968,652	\$16,254,125	\$17,233,200	\$18,918,555	\$25.10
Net Operating Income(⁴)	\$35,192,550	\$34,698,749	\$40,091,035	\$60,497,452	\$80.27
TI/LC	0	0	0	3,752,630	4.98
Capital Expenditures	0	0	0	150,743	0.20
Net Cash Flow	\$35,192,550	\$34,698,749	\$40,091,035	\$56,594,080	\$75.09
Occupancy	98.4%	91.9%	98.0%	97.2%(⁵)	
NOI Debt Yield(⁶)	7.2%	7.1%	8.2%	12.3%	
NCF DSCR(⁶)	1.81x	1.78x	2.06x	2.91x	

(1) Certain items such as straight line rent, interest expense, interest income, lease cancellation income, depreciation, amortization, debt service payments and any other non-recurring or non-operating items were excluded from the historical presentation and are not considered for the underwritten cash flow.

(2) Underwritten Base Rent is inclusive of rent steps through January 2020 and straight line rent for investment grade tenants over the loan term, accounting for approximately \$4.2 million in Underwritten Base Rent. Historic base rent does not include rent from Young & Rubicam.

(3) Total Other Income from 2016 to 2018 included a condominium charge to Young & Rubicam for its share in building expenses. Underwritten Base Rent and Total Reimbursements reflects Young & Rubicam paying reimbursements under its lease.

(4) The increase in Underwritten Net Operating Income from 2018 Net Operating Income is primarily attributable to (i) an additional 214,372 square feet lease executed with Young & Rubicam on floors three through eight, accounting for approximately \$16.3 million in underwritten base rent and (ii) rent steps through January 2020.

(5) Based on the underwritten rent roll dated January 1, 2019.

(6) Metrics are calculated based on the 3 Columbus Circle Senior *Pari Passu* Notes.

- Appraisal.** According to the appraisal, the 3 Columbus Circle Property had an “as-is” appraised value of \$1,080,000,000 as of January 1, 2019.

Property	Appraisal Approach	Value	Discount Rate	Capitalization Rate
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3 Columbus Circle	Discounted Cash Flow Approach	\$1,080,000,000	6.50%	5.00% ⁽¹⁾
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(1) Represents the terminal capitalization rate.

- **Environmental Matters.** Based on a Phase I environmental report dated January 22, 2019, the environmental consultant did not identify evidence of any recognized environmental conditions or recommendations for further action at the 3 Columbus Circle Property.

- **Market Overview and Competition.** The 3 Columbus Circle Property is located in the Midtown West office submarket, proximate to other prominent buildings in Columbus Circle including the former Time Warner Center and the Museum of Arts and Design. Nordstrom’s women’s store is expected to open in 2019 across the street at Central Park Tower. The Columbus Circle neighborhood benefits from nearby attractions including Central Park, Rockefeller

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Center, Radio City Music Hall, Lincoln Center for the Performing Arts and the Museum of Modern Art. In particular, the 3 Columbus Circle Property benefits from its location on Broadway, which is a major artery connecting the southern tip of Manhattan to Upper Manhattan. The 3 Columbus Circle Property's frontage along Broadway, 8th Avenue, West 57th Street and West 58th Street provides its retail tenants with access to the pedestrian traffic in the area. The 3 Columbus Circle Property is accessible by public and vehicular transportation including three subway lines within one block, New York Penn Station within an eight minute drive and LaGuardia Airport within a 21 minute drive.

The 3 Columbus Circle Property is located in Manhattan, New York, in the Midtown West submarket within the greater Midtown office market. The Midtown West submarket contains approximately 31.0 million square feet of office inventory and is bordered by 72nd Street to the north, 42nd Street to the south, Seventh Avenue to the east and the Hudson River to the west. New York City's largest employers include a diverse group of multinational corporations representing a variety of industries including healthcare, financial services, retail and education. Fifty-eight of the nation's Fortune 500 corporations are headquartered in the New York Region including Verizon, J.P. Morgan Chase, Citigroup, IBM, MetLife, PepsiCo, American International Group, Morgan Stanley, New York Life Insurance, Goldman Sachs Group, TIAA, American Express and Time Warner.

As of the fourth quarter of 2018, the greater Midtown Class A office market consisted of approximately 181.1 million square feet of office space with an overall market vacancy of 9.3% and average asking rents of approximately \$75.03 per square foot. The Midtown West Class A submarket totaled approximately 24.5 million square feet with average vacancy of 6.9% and average market asking rents of \$76.87 per square foot. The overall Midtown office market achieved 23.7 million square feet in leasing activity in 2018 with overall and direct absorption levels totaling 7.3 million square feet and 8.1 million square feet, respectively.

The appraisal identified seven directly competitive Class A office rent comparables in the Midtown West submarket. Comparable buildings were built between 1950 and 2009 and range in size from 242,505 square feet to 790,000 square feet. Direct asking rents at the comparable properties ranged between \$65.00 and \$108.00 per square foot with a weighted average of approximately \$82.47 per square foot. The 3 Columbus Circle Property's in-place weighted average office rent is \$71.11 per square foot, which compares favorably to the appraisal's concluded office market rent, ranging between \$77.00 and \$100.00 per square foot, as demonstrated in the table below.

Summary of Appraisal's Concluded Office Market Rent⁽¹⁾

Floor(s)	Appraisal's Concluded Office Market Rent PSF
3, 5-15	\$77.00
4	\$80.00
16-18	\$85.00
19, 23-24	\$93.00
20-22	\$90.00
25-26	\$100.00

(1) Source: Appraisal.

The following table presents certain information relating to comparable buildings for the 3 Columbus Circle Property:

Office Building Comparables⁽¹⁾

Property Name	NRA	Direct Available SF	Sublease Available SF	% Occupied	Direct Asking Rent Low	Direct Asking Rent High
40 West 57th Street	604,936	10,900	2,715	98.2%	\$87.00	\$87.00
1740 Broadway	412,704	0	0	100.0%	N/A	N/A
810 Seventh Avenue	603,000	76,678	22,437	87.3%	\$65.00	\$75.00
888 Seventh Avenue	790,000	0	19,500	100.0%	N/A	N/A
1350 Avenue of the Americas	424,000	65,099	6,783	84.7%	\$78.00	\$95.00
1370 Avenue of the Americas	339,000	50,362	11,636	85.1%	\$75.00	\$108.00
1755 Broadway	242,505	0	0	100.0%	N/A	N/A
Total/Wtd. Average	3,416,145	203,039	63,071	94.1%	\$76.27	\$88.66

(1) Source: Appraisal.

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The Borrower. The borrowers are 3 Columbus Circle LLC – Series A, 3 Columbus Circle LLC – Series B (each a “series” of 3 Columbus Circle LLC formed under the Delaware General Corporation Law) and 3 Columbus Circle LLC, a Delaware limited liability company. Each company is structured to be a single purpose bankruptcy-remote entity with 3 Columbus Circle LLC having two independent directors in its organizational structure. Two of the borrowers, 3 Columbus Circle LLC – Series A and 3 Columbus Circle LLC – Series B, own a portion of the 3 Columbus Circle Property as tenants-in-common. For additional information, please see “*Description of the Mortgage Pool—Statistical Characteristics of the Mortgage Loans—Tenancies-in-Common or Diversified Ownership*” in the Preliminary Prospectus.

The borrower sponsor and nonrecourse carve-out guarantor is Joseph Moinian, the key principal of Moinian. Founded in 1982, Moinian is a private real estate acquisition, ownership, development and management company. Joseph Moinian is the nonrecourse carve-out guarantor for the 3 Columbus Circle Loan Combination. Moinian has acquired commercial properties throughout the country, focusing on major cities such as New York, Chicago, Dallas and Los Angeles. Moinian develops, owns and operates properties across every asset category, including office, hotel, retail, condos and rental apartments. Notable New York City investments include the Oskar, The Sky, 17 Battery North & South and 535-545 Fifth Avenue, with a portfolio of more than 20.0 million square feet.

Escrows. At loan origination, the borrowers deposited (i) approximately \$1,820,891 into an outstanding tenant improvements and leasing commission reserve in connection with three leases and (ii) approximately \$847,794 into a free rent reserve in connection with four leases.

On each due date, the borrowers are required to fund the following reserves with respect to the 3 Columbus Circle Loan Combination: (i) a tax reserve in an amount equal to one-twelfth of the amount that the lender estimates will be necessary to pay taxes over the then succeeding 12-month period (such reserve has been conditionally waived so long as the borrowers have provided satisfactory evidence that taxes have been paid meeting the requirements of the 3 Columbus Circle Loan documents) and (ii) an insurance reserve in an amount equal to one-twelfth of the amount that the lender estimates will be necessary to cover premiums over the then succeeding 12-month period (such reserve has been conditionally waived so long as the borrowers maintain a blanket policy meeting the requirements of the 3 Columbus Circle Loan documents).

During the continuance of a Cash Sweep Event (as defined below), the borrowers are required to deposit into a replacement reserve, on a monthly basis, an amount equal to \$12,500 for replacement reserves (approximately \$0.20 per square foot annually), subject to a cap of \$1,000,000 (approximately \$1.33 per square foot).

During the continuance of a Cash Sweep Event, the borrowers are required to deposit into a TI/LC reserve, on a monthly basis, an amount equal to \$62,900 for tenant improvement and leasing commission obligations (approximately \$1.00 per square foot annually), subject to a cap of \$5,000,000 (approximately \$6.63 per square foot).

During the continuance of a Cash Sweep Event caused by a Tenant Trigger (as defined below), the borrowers are required to deposit into a Young & Rubicam reserve an amount equal to all excess cash flow in the cash management account to cover expenses anticipated to be incurred in connection with re-leasing the Young & Rubicam space, subject to a cap of \$40,000,000 (approximately \$106.60 per square foot of Young & Rubicam space).

Lockbox and Cash Management. The 3 Columbus Circle Loan Combination is structured with a hard lockbox and in place cash management. The borrowers were required at origination to deliver tenant direction letters instructing all tenants to deposit rents into a lockbox account controlled by the lender. All funds in the lockbox account are required to be swept each business day into a cash management account controlled by the lender and disbursed on each payment date in accordance with the loan documents. All funds on deposit in the cash management account following the occurrence and during the continuance of a Cash Sweep Event following payment of debt service, required reserves and operating expenses are required to be deposited into the Young & Rubicam reserve or, to the extent the Cash Sweep Event is caused by a DSCR Trigger Event (as defined below), into the excess cash flow reserve, and in each case to be held and disbursed in accordance with the terms of the loan documents. During the continuance of an event of default, the lender may apply such funds in such order and priority as the lender determines. The lender has been granted a first priority security interest in the cash management account.

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LOAN #8: 3 COLUMBUS CIRCLE

A “**Cash Sweep Event**” means the occurrence and continuation of (i) an event of default, (ii) any bankruptcy action of the borrowers or property manager, (iii) a DSCR Trigger Event or (iv) a Tenant Trigger.

A Cash Sweep Event may be cured in accordance with the following conditions: with respect to a Cash Sweep Event caused solely by (a) clause (i) above, the acceptance of a cure by the lender of the related event of default, (b) clause (ii) above if borrowers have replaced the manager with a qualified manager under a replacement management agreement within 90 days in accordance with the loan documents, (c) clause (iii) above, a DSCR Cure Event (as defined below) has taken place, (d) clause (iv) above, if the Cash Sweep Event is caused solely by the occurrence of (x) a Tenant BK Trigger (as defined below), Young & Rubicam or its parent company affirming the Young & Rubicam lease in the applicable bankruptcy proceeding, (y) a Tenant Vacancy Trigger (as defined below), the replacement of Young & Rubicam with an acceptable replacement tenant pursuant to lease(s) approved in accordance with the terms of the loan documents and such tenant has accepted possession of its premises under the lease(s), with all tenant improvement costs and free rent amounts reserved with the lender, or (z) any Tenant Trigger, upon the satisfaction of the Tenant Escrow Requirement (as defined below) (in which case, the borrowers are deemed to have cured any existing Tenant Trigger immediately upon such date). Each cure is also subject to the following conditions: (1) no other event of default may have occurred and be continuing; and (2) the borrowers pay the lender’s reasonable expenses in connection with such cure. Notwithstanding the foregoing, in no event will the borrowers have the right to cure a Cash Sweep Event occurring from a borrower bankruptcy.

“**DSCR Trigger Event**” means the debt service coverage ratio on the 3 Columbus Circle Loan Combination (as calculated in the loan documents) based on the trailing three-month period immediately preceding the date of determination is less than 1.30x.

“**DSCR Cure Event**” means the debt service coverage ratio on the 3 Columbus Circle Loan Combination (as calculated in the loan documents), based on the trailing three-month period immediately preceding the date of determination, is at least 1.30x for two consecutive quarters.

“**Tenant Trigger**” means either (i) a bankruptcy or certain insolvency actions of Young & Rubicam or its parent company (a “**Tenant BK Trigger**”) or (ii) if Young & Rubicam vacates, abandons or “goes dark” in 85% or more of its leased space (and no sub-tenant is then in occupancy of any of the space) (a “**Tenant Vacancy Trigger**”).

“**Tenant Escrow Requirement**” means the balance of the Young & Rubicam reserve has reached the cap of \$40,000,000.

- **Property Management.** The 3 Columbus Circle Property is managed by Columbus Property Management LLC, a New York limited liability company and an affiliate of the borrowers.

- **Current Mezzanine or Secured Subordinate Indebtedness.** The 3 Columbus Circle Junior Non-Trust Notes, with an aggregate outstanding principal balance as of the Cut-off Date of \$105.0 million, accrue interest at a fixed rate of 3.91400% per annum. The 3 Columbus Circle Junior Non-Trust Notes each had a 120-month term and are interest only for the full term. For additional information, see “*Description of the Mortgage Pool—The Loan Combination—The 3 Columbus Circle Pari Passu-AB Loan Combination*” in the Preliminary Prospectus.

Based on the total combined debt of \$595.0 million, the Cut-off Date LTV Ratio, Maturity Date LTV Ratio, DSCR Based on Underwritten NCF and Debt Yield Based on Underwritten NOI are illustrated below:

Financial Information

	<u>3 Columbus Circle Senior Notes</u>	<u>3 Columbus Circle Loan Combination</u>
Cut-off Date Balance	\$490,000,000	\$595,000,000
Cut-off Date LTV Ratio	45.4%	55.1%
Maturity Date LTV Ratio	45.4%	55.1%
DSCR Based on Underwritten NCF	2.91x	2.40x
Debt Yield Based on Underwritten NOI	12.3%	10.2%

- **Future Mezzanine or Secured Subordinate Indebtedness.** None.

■ **Release of Collateral.** Not permitted.

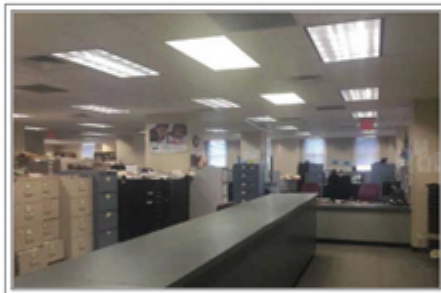
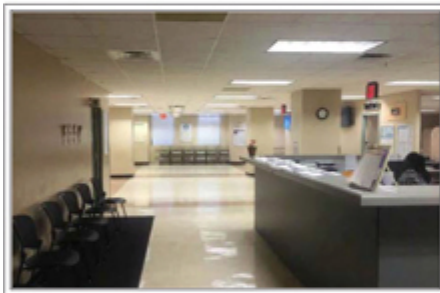
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LOAN #8: 3 COLUMBUS CIRCLE

- Terrorism Insurance.** The 3 Columbus Circle Loan Combination documents require that the “all-risk” insurance policy required to be maintained by the borrowers provide coverage for terrorism in an amount equal to the original principal balance of the loan (with a replacement cost endorsement), plus business interruption coverage in an amount equal to 100% of the projected gross income for the applicable property until the completion of restoration or the expiration of 24 months, with a 6-month extended period of indemnity. The “all-risk” policy containing terrorism insurance is required
- to contain a deductible that is acceptable to the lender and is no greater than \$100,000. However, if the Terrorism Risk Insurance Program Reauthorization Act of 2015 (TRIPRA) is no longer in effect, the borrowers are not required to spend more than two times the then-current premium for a separate “all-risk” or equivalent policy (including business interruption coverage) for terrorism coverage (but is required to purchase the maximum coverage available for such amount). See “*Risk Factors—Terrorism Insurance May Not Be Available for All Mortgaged Properties*” in the Preliminary Prospectus.

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LOAN #9: 250 LIVINGSTON



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LOAN #9: 250 LIVINGSTON



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LOAN #9: 250 LIVINGSTON

Mortgaged Property Information	
Number of Mortgaged Properties	1
Location (City/State)	Brooklyn, New York
Property Type	Mixed Use
Size (SF) ⁽¹⁾	370,305
Total Occupancy as of 4/1/2019 ⁽¹⁾	100.0%
Owned Occupancy as of 4/1/2019 ⁽¹⁾	100.0%
Year Built / Latest Renovation	1910 / 2013
Appraised Value	\$210,000,000
Borrower Sponsor	Clipper Realty L.P. and Clipper Realty Inc.
Property Management	Self-Managed
Underwritten Revenues	\$16,032,086
Underwritten Expenses	\$4,309,444
Underwritten Net Operating Income (NOI)	\$11,722,642
Underwritten Net Cash Flow (NCF)	\$11,638,292
Cut-off Date LTV Ratio ⁽²⁾	59.5%
Maturity Date LTV Ratio ⁽²⁾	59.5%
DSCR Based on Underwritten NOI / NCF ⁽²⁾	2.55x / 2.53x
Debt Yield Based on Underwritten NOI / NCF ⁽²⁾	9.4% / 9.3%

Mortgage Loan Information		
Loan Seller		CREFI
Cut-off Date Balance ⁽³⁾		\$50,000,000
Cut-off Date Principal Balance per SF ⁽²⁾		\$337.56
Percentage of Initial Pool Balance		4.2%
Number of Related Mortgage Loans		None
Type of Security		Fee Simple
Mortgage Rate		3.63000%
Original Term to Maturity (Months)		120
Original Amortization Term (Months)		NAP
Original Interest Only Period (Months)		120
	Escrows⁽⁴⁾	
	Upfront	Monthly
Taxes	\$148,101	\$148,101
Insurance	\$0	\$0
Replacement Reserve	\$0	\$0
TI/LC	\$0	\$0
Other	\$5,376,645	\$0

Sources and Uses

Sources	\$	%	Uses	\$	%
Loan Combination	\$125,000,000	100.0%	Loan Payoff	\$75,143,438	60.1%
			Principal Equity Distribution	41,116,488	32.9
			Reserves	5,524,746	4.4
			Origination Costs	3,215,328	2.6
Total Sources	\$125,000,000	100.0%	Total Uses	\$125,000,000	100.0%

The 250 Livingston Property (as defined below) is comprised of 343,486 SF of commercial space and 26,819 SF of residential space consisting of 36 units. Total Occupancy and Owned Occupancy as of 4/1/2019 are 100.0% for the commercial space and 94.4% based on units for the residential space.

(1) Calculated based on the aggregate outstanding principal balance as of the Cut-off Date of the 250 Livingston Loan Combination (as defined below). See “—The Mortgage Loan” below.

(2) The Cut-off Date Balance of \$50,000,000 represents the non-controlling note A-2, which is part of a larger Loan Combination evidenced by two *pari passu* notes having an aggregate outstanding principal balance as of the Cut-off Date of \$125,000,000. The related companion loan, which is evidenced by the controlling note A-1 (\$75,000,000) and was contributed to GSMS 2019-GC40 transaction. See “—The Mortgage Loan” below.

(3) See “—Escrows” below.

The Mortgage Loan. The 250 Livingston mortgage loan (the “250 Livingston Loan”) is part of a loan combination (the “250 Livingston Loan Combination”) evidenced by two *pari passu* notes that are secured by a first mortgage encumbering the borrower’s fee simple interest in a 370,305 SF mixed use building located in Brooklyn, New York (the “250 Livingston Property”). The 250 Livingston Loan, which is evidenced by the non-controlling note A-2, has an outstanding principal balance as of the Cut-off Date of \$50,000,000 and represents approximately 4.2% of the Initial Pool Balance. The related companion loan is evidenced by the controlling note A-1 (\$75,000,000) which was contributed to the GSMS 2019-GC40 transaction. The 250 Livingston Loan Combination, which accrues interest at an interest rate of 3.63000% *per annum*, was originated by CREFI on May 31, 2019, had an aggregate original principal balance of \$125,000,000 and has an aggregate outstanding principal balance as of the Cut-off Date of \$125,000,000. The proceeds of the 250 Livingston Loan Combination were primarily used to refinance prior debt secured by the 250 Livingston

Property, return equity to the borrower sponsor, pay origination costs and fund upfront reserves. The 250 Livingston Property was previously securitized in the GSMS 2013-GC12 transaction.

The table below summarizes the promissory notes that comprise the 250 Livingston Loan Combination. The relationship between the holders of the 250 Livingston Loan Combination is governed by a co-lender agreement as described under “*Description of the Mortgage Pool–The Loan Combinations–The Outside Serviced Pari Passu Loan Combinations*” in the Preliminary Prospectus.

Note	Original Balance	Cut-off Date Balance	Note Holder	Controlling Piece
A-2	\$50,000,000	\$50,000,000	BMARK 2019-B12	No
A-1	\$75,000,000	\$75,000,000	GSMS 2019-GC40	Yes
Total / Wtd. Avg.	\$125,000,000	\$125,000,000		

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LOAN #9: 250 LIVINGSTON

The 250 Livingston Loan Combination had an initial term of 120 months, has a remaining term of 118 months as of the Cut-off Date and requires monthly payments of interest only for the term of the 250 Livingston Loan Combination. The scheduled maturity date of the 250 Livingston Loan Combination is the due date in June 2029. Provided no event of default has occurred and is continuing, at any time after the earlier to occur of (i) May 31, 2023 and (ii) the second anniversary of the closing date of the last securitization of a note comprising part of the 250 Livingston Loan Combination, the 250 Livingston Loan Combination may be defeased with certain direct full faith and credit obligations of the United States of America or other obligations which are "government securities" permitted under the 250 Livingston Loan Combination documents.

Voluntary prepayment of the 250 Livingston Loan Combination is permitted on or after the due date in March 2029 without payment of any prepayment premium.

The Mortgaged Property. The 250 Livingston Property is a 12-story mixed use building located in downtown Brooklyn between Bond Street and Hoyt Street. The 250 Livingston Property contains 343,486 SF of office and ground level retail space on floors 1-8 (which collectively account for 91.8% of underwritten EGI) and 36 residential units (26,819 SF of space and accounting for 8.2% of underwritten EGI) on floors 9-12. The 250 Livingston Property was originally constructed in 1910 and has been owned and operated by the borrower sponsor, Clipper Realty Inc., since the firm's acquisition in 2002. The residential floors were converted to their current use in stages between 2003 and 2013 and consist of 14 studio apartment units and 22 one-bedroom apartment units. The studio units average approximately 736 SF and underwritten monthly base rent of \$3,037 per unit while the one-bedroom units average approximately 751 SF and underwritten monthly base rent of \$3,178. The City of New York occupies approximately 99.7% of the commercial space at the 250 Livingston Property with the remaining 0.3% of the commercial space (990 SF) occupied by a deli tenant. As of the underwritten rent roll dated April 1, 2019, the multifamily and commercial portions of the 250 Livingston Property were 94.4% and 100.0% leased, respectively.

The sole office tenant, The City of New York (99.7% of commercial NRA; 99.4% of underwritten commercial base rent; rated AA/Aa1/AA by Fitch, Moody's and S&P), currently occupies 342,496 SF of office space under two leases with expiration dates of August 22, 2020. On or around May 8, 2019, The City of New York executed a new lease for said space (i.e. to succeed the existing leases) which will go into effect on the later to occur of August 23, 2020 or on the date that all of the borrower's work in connection with the tenant's initial occupancy of the premises is substantially completed (the "**Commencement Date**"), and will expire on the day before the tenth anniversary of such Commencement Date. The borrower advised that this work is expected to be completed by the end of the year. We cannot assure you that this work will be completed as expected or at all. The City of New York has the option to terminate the aforementioned new lease with 18 months' notice on (i) the 5th anniversary of the Commencement Date, without payment of any termination fee or (ii) the 7th anniversary of the Commencement Date, with payment of a \$16,434,979.15 termination fee. The City of New York has been in occupancy at the 250 Livingston Property since 1977 and has continued to expand its space into its current footprint of 342,496 SF. The City of New York's space at the 250 Livingston Property is utilized by the New York City Human Resources Administration (floors 1-7) and the New York City Department of Environmental Protection (floor 8).

The following table presents certain information relating to the commercial and retail tenants at the 250 Livingston Property:

Largest Owned Commercial Tenants by Underwritten Base Rent⁽¹⁾

Tenant Name	Credit Rating (Fitch/MIS/S&P) ⁽²⁾	Tenant GLA	% of Owned GLA	UW Base Rent ⁽³⁾	% of Total UW Base Rent ⁽³⁾	UW Base Rent \$ per SF ⁽³⁾	Lease Expiration	Renewal / Extension Options
The City of New York ⁽⁴⁾	AA / Aa1 / AA	342,496	99.7%	\$15,174,394	99.4%	\$44.31	8/22/2030 ⁽⁵⁾	NAP
Metro Finest Deli	NR / NR / NR	990	0.3	87,677	0.6	\$88.56	5/31/2030	1, 5-year option
Total / Wtd. Avg.		343,486	100.0%	\$15,262,071	100.0%	\$44.43		

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- (1) Based on the underwritten rent roll dated as of April 1, 2019.
 - (2) Certain ratings are those of the parent company whether or not the parent guarantees the lease.
UW Base Rent, % of Total UW Base Rent and UW Base Rent \$ per SF represent the straight-line average rent for The City of New York tenant through the maturity date of the 250 Livingston Loan Combination and include \$1,719 of contractual rent steps through June 2019 related to Metro Finest Deli.
The City of New York has the option to terminate the aforementioned new lease with 18 months' notice on (i) the 5th anniversary of the
 - (4) Commencement Date, without payment of any termination fee or (ii) the 7th anniversary of the Commencement Date, with payment of a \$16,434,979.15 termination fee.
Based on the expiration date of the new lease which will succeed the two current leases (with expiration dates, of August 22, 2020) covering
 - (5) The City of New York's office space in the 250 Livingston Property. The City of New York executed a new lease which will go into effect on the Commencement Date (the later to occur of August 23, 2020 or on the date that all of the borrower's work in connection with the tenant's initial occupancy of the premises is substantially completed). The City of New York's new lease expires 10 years after the Commencement Date.

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LOAN #9: 250 LIVINGSTON

The following table presents certain information relating to the multifamily units and rent at the 250 Livingston Property:

Multifamily Unit Mix⁽¹⁾

Unit Type	# of Units	% of Units	Occupied Units	% Occupied	Average Unit Size (SF)	In-Place Average Rent per Month
Studio	14	38.9%	12	85.7%	736	\$3,037
One Bedroom	22	61.1	22	100.0%	751	3,178
Total / Average	36	100.0%	34	94.4%	745	\$3,128

(1) Based on the underwritten rent roll dated April 1, 2019.

The following table presents certain information relating to the commercial lease rollover schedule at the 250 Livingston Property, based on initial lease expiration dates:

Lease Expiration Schedule⁽¹⁾

Year Ending December 31	Expiring Owned GLA	% of Owned GLA	Cumulative % of Owned GLA	UW Base Rent ⁽²⁾	% of Total UW Base Rent ⁽²⁾	UW Base Rent \$ per SF ⁽²⁾	# of Expiring Tenants
MTM	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2019	0	0.0	0.0%	0	0.0	0.00	0
2020	0	0.0	0.0%	0	0.0	0.00	0
2021	0	0.0	0.0%	0	0.0	0.00	0
2022	0	0.0	0.0%	0	0.0	0.00	0
2023	0	0.0	0.0%	0	0.0	0.00	0
2024	0	0.0	0.0%	0	0.0	0.00	0
2025	0	0.0	0.0%	0	0.0	0.00	0
2026	0	0.0	0.0%	0	0.0	0.00	0
2027	0	0.0	0.0%	0	0.0	0.00	0
2028	0	0.0	0.0%	0	0.0	0.00	0
2029	0	0.0	0.0%	0	0.0	0.00	0
2030 ⁽³⁾ & Thereafter	343,486	100.0	100.0%	15,262,071	100.0	44.43	2
Vacant	0	0.0	100.0%	0	0.0	0.00	0
Total / Wtd. Avg.	343,486	100.0%		\$15,262,071	100.0%	\$44.43	2

(1) Certain tenants may have lease termination options that are exercisable prior to the originally stated expiration date of the subject lease and that are not considered in the Lease Expiration Schedule.

(2) UW Base Rent, % of Total UW Base Rent and UW Base Rent \$ per SF represent the straight-line average rent for The City of New York tenant through the maturity date of the 250 Livingston Loan Combination and include \$1,719 of contractual rent steps through June 2019 related to the Metro Finest Deli.

(3) Based on the expiration date of the new lease, which will succeed the two current leases (with expiration dates, of August 22, 2020) covering The City of New York's office space in the 250 Livingston Property. The City of New York executed a new lease which will go into effect on the Commencement Date (the later to occur of August 23, 2020 or on the date that all of the borrower's work in connection with the tenant's initial occupancy of the premises is substantially completed). The City of New York's new lease expires 10 years after the Commencement Date.

The following table presents certain information relating to historical leasing at the 250 Livingston Property:

Historical Leased⁽¹⁾

	2016	2017	2018	As of 4/1/2019 ⁽²⁾
--	------	------	------	-------------------------------

Commercial Owned Space	100.0%	100.0%	100.0%	100.0%
Residential Owned Space	90.4%	90.9%	90.5%	94.4%

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- (1) As provided by the borrower, which represents occupancy as of September 30 for the indicated year, unless otherwise specified.
(2) Based on the underwritten rent roll dated April 1, 2019.

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LOAN #9: 250 LIVINGSTON

- Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the 250 Livingston Property:

Cash Flow Analysis⁽¹⁾

	2016	2017	2018	TTM 3/31/2019	Underwritten	Underwritten \$ per SF
Base Rent - Apartments	\$1,198,879	\$1,323,038	\$1,144,960	\$1,160,521	\$1,276,328	\$3.45
Potential Income from Vacant Units	0	0	0	0	80,984	0.22
Gross Potential Income - Apartments	\$1,198,879	\$1,323,038	\$1,144,960	\$1,160,521	\$1,357,312	\$3.67
Vacancy & Credit Loss ⁽²⁾	0	0	0	0	(80,984)	(0.22)
Other Income - Apartments	103,680	86,405	48,729	43,040	43,040	0.12
EGI - Apartments	\$1,302,559	\$1,409,443	\$1,193,689	\$1,203,561	\$1,319,368	\$3.56
Commercial Rental Income ⁽³⁾⁽⁴⁾	\$5,680,659	\$8,262,064	\$8,264,304	\$8,246,503	\$15,262,071	\$41.21
City of New York Parking Rent	208,333	225,000	225,000	225,000	225,000	0.61
Expense Reimbursements	1,309,563	1,418,187	1,538,792	1,576,234	0	0.00
Gross Potential Income - Commercial	\$7,198,555	\$9,905,251	\$10,028,096	\$10,047,737	\$15,487,071	\$41.82
Vacancy & Credit Loss ⁽²⁾	0	0	0	0	(774,354)	(2.09)
EGI - Commercial	\$7,198,555	\$9,905,251	\$10,028,096	\$10,047,737	\$14,712,718	\$39.73
Total Effective Gross Income	\$8,501,114	\$11,314,694	\$11,221,785	\$11,251,298	\$16,032,086	\$43.29
Real Estate Taxes	\$1,485,201	\$1,579,909	\$1,663,471	\$1,693,890	\$1,975,173	\$5.33
Insurance	133,173	129,447	116,099	118,740	108,713	0.29
Management Fee	255,033	339,441	336,654	337,539	480,963	1.30
Other Operating Expenses	1,632,674	1,655,205	1,759,336	1,711,747	1,744,596	4.71
Total Operating Expenses	\$3,506,081	\$3,704,002	\$3,875,560	\$3,861,916	\$4,309,444	\$11.64
Net Operating Income⁽⁴⁾	\$4,995,033	\$7,610,692	\$7,346,225	\$7,389,382	\$11,722,642	\$31.66
TI/LC	0	0	0	0	0	0.00
Capital Expenditures	0	0	0	0	84,350	0.23
Net Cash Flow	\$4,995,033	\$7,610,692	\$7,346,225	\$7,389,382	\$11,638,292	\$31.43
Occupancy⁽⁵⁾	100.0%	100.0%	100.0%	100.0%	94.0% ⁽²⁾	
NOI Debt Yield	4.0%	6.1%	5.9%	5.9%	9.4%	
NCF DSCR	1.09x	1.65x	1.60x	1.61x	2.53x	

- Interest income, lease cancellation income, depreciation, amortization, debt service payments and any other non-recurring or non-operating items were excluded from the historical presentation and are not considered for the underwritten cash flow.
- Vacancy & Credit Loss is underwritten to the current, economic vacancy of 6.0% for the commercial space and 5.0% based on units for the residential space.
- Commercial Rental Income represents the straight-line average rent for The City of New York tenant through the maturity date of the 250 Livingston Loan Combination and includes \$1,719 of contractual rent steps through June 2019 related to the Metro Finest Deli. The increase from TTM 3/31/2019 Net Operating Income to Underwritten Net Operating Income is primarily attributable to the increase in The City of New York's rent in connection with its newly executed 10-year lease. Commercial Rental Income is comprised of the current rent that The City of New York is paying (\$8,150,060) and the straight line average rent over the loan term (\$7,024,334).
- City of New York's rent in connection with its newly executed 10-year lease. Commercial Rental Income is comprised of the current rent that The City of New York is paying (\$8,150,060) and the straight line average rent over the loan term (\$7,024,334).
- Occupancy represents only the commercial rent roll's occupancy, as apartment income accounts for less than 10% of effective gross income.

- Appraisal.** According to the appraisal, the 250 Livingston Property had an "as-is" appraised value of \$210,000,000 as of April 16, 2019.

<u>Appraisal Approach</u>	<u>Value</u>	<u>Discount Rate</u>	<u>Capitalization Rate</u>
Income Capitalization Approach	\$210,000,000	7.00% ⁽¹⁾	6.00% ⁽²⁾

(1) Represents the internal rate of return.

(2) Represents the terminal capitalization rate.

Environmental Matters. Based on a Phase I environmental report dated November 9, 2018, the environmental consultant did not identify evidence of any recognized environmental conditions or recommendations for further action at the 250 Livingston Property other than the continued implementation of the current asbestos operations and maintenance program.

Market Overview and Competition. The 250 Livingston Property is located in Brooklyn, New York, within the Brooklyn office market. Located on Livingston Street between Bond and Hoyt Streets, the 250 Livingston Property is situated north of the Boerum Hill neighborhood. According to the appraisal as of the fourth quarter of 2018, the Brooklyn office market contained approximately 29.8 million SF with an overall direct vacancy of 13.5% and average direct asking rents of \$43.24 per SF. The 250 Livingston Property is more specifically located within the Downtown

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LOAN #9: 250 LIVINGSTON

Brooklyn office submarket. According to the appraisal as of the fourth quarter of 2018, the Downtown Brooklyn office submarket contained approximately 12.4 million SF with an overall direct vacancy rate of 6.7% and average direct asking rents of \$56.01 per SF.

The 250 Livingston Property is located approximately five blocks north of the A, C, F, N and R subway lines at the Jay Street - Metrotech station and within close proximity to the No. 2 and 3 subway lines at the Hoyt Street - Fulton Street station. The 250 Livingston Property is also located several blocks northeast of the Atlantic Terminal transit station, which is the third largest transportation hub in New York City. The Brooklyn and Manhattan Bridge ramps are each less than 10 blocks to the northwest of the 250 Livingston Property and the 250 Livingston Property is also within close proximity to the Brooklyn-Queens Expressway.

The following table presents certain information relating to comparable office buildings for the 250 Livingston Property:

Office Building Comparables⁽¹⁾

Property Name	NRA (SF)	Direct Available SF	Sublease Available SF	Direct Occupancy (%)	Direct Asking Rent PSF (Low)	Direct Asking Rent PSF (High)
250 Livingston⁽²⁾	343,486	0	0	100.0%	NAP	NAP
44 Court Street	120,000	922	0	99.2%	\$42.00	\$42.00
32 Court Street	115,586	0	0	100.0%	NAP	NAP
50 Court Street	110,000	13,213	0	88.0%	\$40.00	\$45.00
486-496 Fulton Street	237,463	0	0	100.0%	NAP	NAP
368-370 Jay Street	345,639	0	0	100.0%	NAP	NAP
210 Joralemon Street	383,442	0	0	100.0%	NAP	NAP
141 Livingston Street	185,000	0	0	100.0%	NAP	NAP
240-252 Livingston Street	325,041	0	0	100.0%	NAP	NAP
175 Remsen Street	115,000	0	2,577	100.0%	NAP	NAP
41 Flatbush Avenue	270,000	242,992	0	10.0%	\$40.00	\$55.00
30 Flatbush Avenue	235,000	0	0	100.0%	NAP	NAP
25 Elm Place	159,457	0	0	100.0%	NAP	NAP
26 Court Street	293,137	2,090	0	99.3%	\$50.00	\$50.00
186 Joralemon Street	75,000	2,650	0	96.5%	\$50.00	\$50.00
180 Livingston Street	257,000	0	0	100.0%	NAP	NAP
177 Livingston Street	114,108	0	0	100.0%	NAP	NAP
191 Joralemon Street	138,000	0	0	100.0%	NAP	NAP
130 Livingston Street	407,533	0	0	100.0%	NAP	NAP
189 Montague Street	85,644	0	0	100.0%	NAP	NAP
195 Montague Street	211,391	31,883	0	84.9%	\$45.00	\$55.00
Total (excluding 250 Livingston)	4,138,441	293,750	2,577			
Average (excluding 250 Livingston)	209,172	14,688	129	93.0%	\$40.00	\$55.00

(1) Source: Appraisal.

(2) Based on the underwritten rent roll dated April 1, 2019, excludes the 26,819 SF of residential space at the 250 Livingston Property and includes 990 SF of retail space.

The Borrower. The borrower, 250 Livingston Owner LLC, a Delaware limited liability company and a recycled single purpose entity, is 100% owned by Berkshire Equity LLC which is approximately 40.4% owned by its managing member, Clipper Realty L.P., a Delaware limited partnership. Legal counsel to the borrower delivered a non-consolidation opinion in connection with the origination of the 250 Livingston Loan Combination. Clipper Realty L.P. is approximately 96.1% owned by its general partner, Clipper Realty Inc., a Maryland corporation and public REIT, and approximately 3.9% owned by various limited partners. The non-recourse carve-out guarantors are Clipper Realty Inc. and Clipper Realty

L.P. Clipper Realty Inc. is a real estate investment trust that is headquartered in Brooklyn, New York. Clipper Realty Inc. specializes in acquiring, owning, repositioning, operating and managing various asset types.

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LOAN #9: 250 LIVINGSTON

Escrows. On the origination date of the 250 Livingston Loan Combination, the borrower funded a reserve of \$148,101 for real estate taxes and \$5,376,645 for a gap rent reserve. On each due date commencing with the due date occurring in July 2019 through and including the due date occurring in August 2020, the lender is required to deposit a portion of the gap rent reserve funds equal to \$413,588 into an account designated by the borrower (unless a 250 Livingston Trigger Period (as defined below) is then ongoing, in which case said amount will be deposited into the lockbox account). If the borrower fails to deliver evidence to the lender on or before August 30, 2020 that the New ST Lease Commencement Conditions (as defined below) have been satisfied, then on the due date in September 2020 and each due date thereafter until the lender receives evidence that the New ST Lease Commencement Conditions have been satisfied, the borrower will be required to deposit an amount equal to the positive difference (as determined by the lender in its sole, but good faith, discretion) between: (x) the full amount of rent which would have been paid pursuant to the New ST Lease (as defined below) during the applicable month assuming the New ST Lease Commencement Conditions had been satisfied prior to the date of said deposit and (y) the amount that the lender anticipates will actually be received pursuant to the Existing ST Lease (as defined below) for the applicable month (each such deposit, a “**Gap Rent True-Up Deposit**”).

An “**Existing ST Lease**” means (individually and/or collectively, as the context requires) each of (i) that certain Agreement of Lease, dated as of January 1, 1997 by and between the borrower as successor-in-interest to NPMM Realty, Inc., as landlord, and The City of New York and (ii) that certain Agreement of Lease, dated as of July 1, 1999 by and between Livingston Acquisition, LLC, as landlord, and The City of New York, as tenant.

A “**New ST Lease**” means that certain Agreement of Lease, dated on or around May 8, 2019 by and between the borrower, as landlord, and The City of New York, as tenant.

The “**New ST Lease Commencement Conditions**” means: (i) all Unfunded Obligations (as defined below) with respect to the New ST Lease have been completed in a manner acceptable to the lender (in its reasonable discretion), (ii) the Commencement Date (as defined above) has occurred, (iii) the tenant under the New ST Lease has commenced the payment of full unabated rent pursuant to the New ST Lease and (iv) no Specified Tenant Trigger Period (as defined below) is ongoing.

Additionally, on each monthly due date, the borrower is required to fund the following reserves with respect to the 250 Livingston Loan Combination: (i) a tax reserve in an amount equal to one-twelfth of the amount that the lender estimates (initially \$148,101) will be necessary to pay taxes over the then succeeding 12-month period, (ii) an insurance reserve in an amount equal to one-twelfth of the amount that the lender estimates will be necessary to cover premiums over the then succeeding 12-month period; however, such reserve has been conditionally waived so long as the borrower maintains a blanket policy meeting the requirements of the 250 Livingston Loan Combination documents and (iii) during the continuance of a 250 Livingston Trigger Period (as defined below), replacement reserves in an amount equal to \$7,029.

The borrower also covenanted under the 250 Livingston Loan Combination documents to (i) complete the façade work and the replacement of the roof (the “**Immediate Repairs**”) within 12 months from the origination date and (ii) complete and/or pay for certain tenant improvements pursuant to the New ST Lease (the “**Unfunded Obligations**”) as and when the same are required. If an event of default occurs and is continuing and/or if the borrower breaches the requirement to pay the Unfunded Obligations or perform the Immediate Repairs, the borrower will be required, within five days after the lender requests the same, to deliver cash (to be held as security for completion of the Unfunded Obligations, Immediate Repairs and security for payment of the debt under the 250 Livingston Loan Combination) in the amount that the lender determines (in its reasonable discretion) is necessary to complete the Unfunded Obligations and outstanding Immediate Repairs (the “**Guaranteed Reserve Deposit**”). At origination of the 250 Livingston Loan Combination, the borrower and the guarantor personally guaranteed the obligation to make a Guaranteed Reserve Deposit and the obligation to make a Gap Rent True-Up Deposit.

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LOAN #9: 250 LIVINGSTON

Lockbox and Cash Management. The 250 Livingston Loan Combination is structured with a springing lockbox and springing cash management. The 250 Livingston Loan Combination documents require that, upon the occurrence and during the continuance of a 250 Livingston Trigger Period, the borrower is required to direct all tenants to deposit rents directly to a lender-controlled lockbox account. In addition, the borrower is required to cause all rents received by the borrower or the property manager with respect to the 250 Livingston Property to be deposited into such lockbox account immediately following receipt. On each business day during the continuance of a 250 Livingston Trigger Period, all amounts in the lockbox account are required to be remitted to a lender-controlled cash management account to be applied and disbursed in accordance with the 250 Livingston Loan Combination documents and all excess cash flow funds remaining in the cash management account after the application of such funds in accordance with the 250 Livingston Loan Combination documents are required to be held by the lender in an excess cash flow reserve account as additional collateral for the 250 Livingston Loan Combination. Upon an event of default under the 250 Livingston Loan Combination documents, the lender will apply funds to the debt in such priority as it may determine.

A “**250 Livingston Trigger Period**” means a period commencing upon the earliest to occur of (i) an event of default, (ii) the debt yield being less than 7.0%, and (iii) a Specified Tenant Trigger Period (as defined below), and expiring upon (a) with respect to clause (i) above, the cure of such event of default, (b) with respect to clause (ii) above, the date that the debt yield is equal to or greater than 7.25% for two consecutive calendar quarters, and (c) with respect to clause (iii) above, such Specified Tenant Trigger Period ceasing to exist.

A “**Specified Tenant**” means, as applicable, (i) The City of New York, (ii) any other tenant leasing all or a portion of the applicable Specified Tenant space and any guarantors of the related Specified Tenant lease.

A “**Specified Tenant Termination Exercise Event**” means the Specified Tenant pursuant to the New ST Lease has given written notice that it intends to exercise the termination right set forth in the New ST Lease.

A “**Specified Tenant Trigger Period**” will (A) commence upon the first to occur of (i) a Specified Tenant being in a monetary or material non-monetary default under the applicable Specified Tenant lease beyond all applicable notice and cure periods set forth in the Specified Tenant lease, (ii) a Specified Tenant failing to be in actual, physical possession of the Specified Tenant space and open for business, (iii) the Specified Tenant giving notice that it is terminating its lease for all or any portion of the Specified Tenant space, (iv) any termination or cancellation of any Specified Tenant lease (including, without limitation, rejection in any bankruptcy or similar insolvency proceeding) and/or any Specified Tenant lease failing to otherwise be in full force and effect, (v) any bankruptcy or similar insolvency of a Specified Tenant, (vi) a Specified Tenant failing to extend or renew the applicable Specified Tenant lease on or prior to the applicable Specified Tenant extension deadline in accordance with the applicable terms and conditions of the applicable Specified Tenant lease and the 250 Livingston Loan Combination documents for the applicable Specified Tenant renewal term and (vii) to the extent a Specified Tenant Termination Exercise Event has occurred, the date that is 18 months prior to the date the New ST Lease will terminate in connection with said Specified Tenant Termination Exercise Event, and (B) expire upon the first to occur of (i) the satisfaction of the Specified Tenant cure conditions under the 250 Livingston Loan Combination documents, or (ii) the borrower leasing either the entire Specified Tenant space or a portion thereof in accordance with the applicable terms and conditions of the 250 Livingston Loan Combination documents, the applicable tenant under the lease being in actual physical occupancy of and open to the public for business in, the space demised under its lease and paying the full, unabated amount of the rent due under its lease.

- **Property Management.** The 250 Livingston Property is self-managed by the borrower.
- **Mezzanine or Secured Subordinate Indebtedness.** Not permitted.
- **Release of Collateral.** Not permitted.

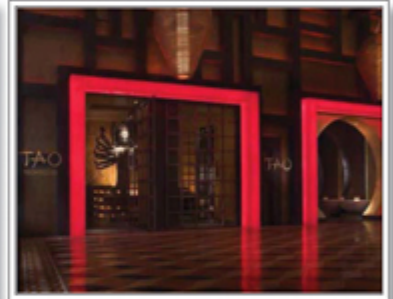
Terrorism Insurance. The 250 Livingston Loan Combination documents require that the “all-risk” insurance policy required to be maintained by the borrower provide coverage for terrorism in an amount equal to the full replacement cost of the 250 Livingston Property, plus business interruption coverage in an amount equal to 100% of the projected gross income for the 250 Livingston Property until the completion of restoration or the expiration of 18 months, with a six-month

extended period of indemnity. The “all-risk” policy containing terrorism insurance is required to contain a deductible that is no greater than \$25,000. See “*Risk Factors—Terrorism Insurance May Not Be Available for All Mortgaged Properties*” in the Preliminary Prospectus.

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LOAN #10: GRAND CANAL SHOPPES

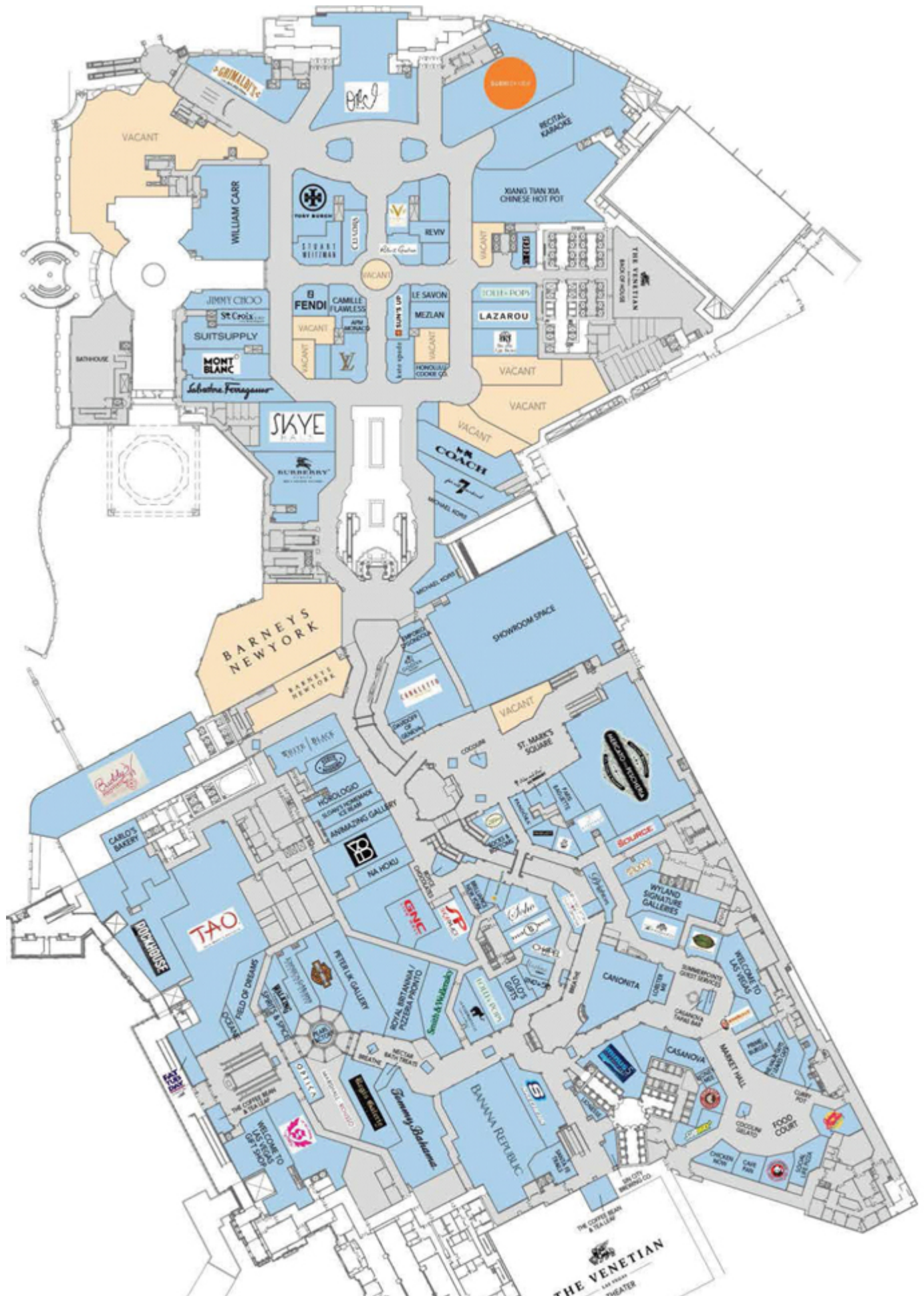


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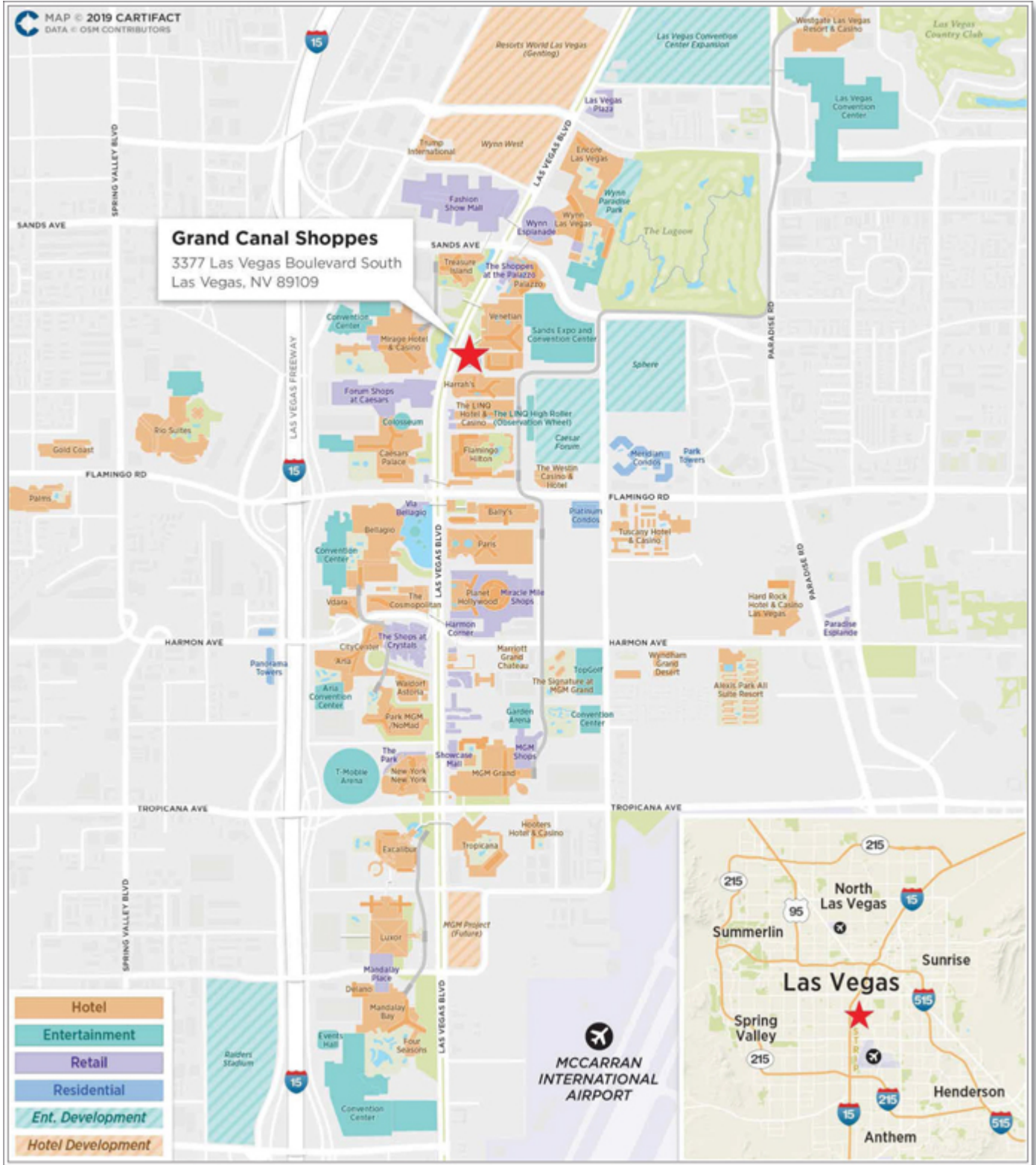


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LOAN #10: GRAND CANAL SHOPPES

Mortgaged Property Information		Mortgage Loan Information	
Number of Mortgaged Properties	1	Loan Seller ⁽⁴⁾	JPM
Location (City/State)	Las Vegas, Nevada	Cut-off Date Balance ⁽⁵⁾	\$50,000,000
Property Type	Retail	Cut-off Date Balance per SF	\$1,000
Size (SF) ⁽¹⁾	759,891	Percentage of Initial Pool Balance	
Total Occupancy as of 5/31/2019 ⁽¹⁾	94.0%	Number of Related Mortgage Loans	
Owned Occupancy as of 5/31/2019 ⁽¹⁾	94.0%	Type of Security	Fee Simple/Leasehold
Year Built / Latest Renovation	1999 / 2007	Mortgage Rate ⁽⁶⁾	3.74%
Appraised Value ⁽²⁾	\$1,640,000,000	Original Term to Maturity (Months)	
Appraisal Date	4/03/2019	Original Amortization Term (Months)	
Borrower Sponsors	Grand Canal Shoppes Holdings, LLC	Original Interest Only Period (Months)	
Property Management	Brookfield Properties Retail Inc.	First Payment Date	8/1/2019
Underwritten Revenues	\$104,029,334	Maturity Date	7/1/2024
Underwritten Expenses	\$31,007,624		
Underwritten Net Operating Income (NOI)	\$73,021,709	Escrows⁽⁷⁾	
Underwritten Net Cash Flow (NCF)	\$70,997,903		Upfront
Cut-off Date LTV Ratio ⁽³⁾	46.3%	Taxes	\$0
Maturity Date LTV Ratio ⁽³⁾	46.3%	Insurance	\$0
DSCR Based on Underwritten NOI / NCF ⁽³⁾	2.53x / 2.46x	Replacement Reserve	\$0
Debt Yield Based on Underwritten NOI / NCF ⁽³⁾	9.6% / 9.3%	TI/LC	\$0
		Other ⁽⁸⁾	\$13,527,940

Sources and Uses

Sources	\$	%	Uses	\$
Senior Loan Combination Amount ⁽⁴⁾	\$760,000,000	77.9%	Existing CMBS Mortgage Loan Payoff	\$627,284,452
Subordinate Companion Loan Amount	215,000,000	22.1	Upfront Reserves	13,527,940
			Closing Costs	1,143,041
			Return of Equity	333,044,567
Total Sources	\$975,000,000	100.0%	Total Uses	\$975,000,000

- Size (SF) excludes the 84,743 SF space currently leased to Barneys New York. Though initially included in the collateral, the borrowers have the
- (1) right to obtain release of such space with no related prepayment of the Grand Canal Shoppes Loan Combination (as defined below), subject to certain conditions in the loan documents. As such, no value, underwritten rental income or square footage has been attributed to this space.
 - (2) Appraised Value represents the "As-Is" Value which is exclusive of value associated with the Barneys New York space, which may be released from the collateral upon lease expiration in January 2020. See "Release of Collateral" below.
 - (3) Calculated based on the aggregate outstanding principal balance of the Grand Canal Shoppes Senior *Pari Passu* Notes (as defined below). See "—The Mortgage Loan" below.
 - (4) The Grand Canal Shoppes Loan Combination (as defined below) was co-originated by MSBNA (as defined below), JPMCB (as defined below), WFB (as defined below) and GS (as defined below).
 - (5) The Grand Canal Shoppes Loan (as defined below) is part of a loan combination comprised of (i) 23 senior *pari passu* notes, with an aggregate outstanding principal balance as of the Cut-off Date of approximately \$760.0 million and (ii) one subordinate note, with an aggregate outstanding principal balance as of the Cut-off Date of \$215.0 million.
 - (6) Reflects the Grand Canal Shoppes Senior *Pari Passu* Loans only. The Grand Canal Shoppes Subordinate Companion Loan accrues interest at the rate of 6.25% per annum.
 - (7) See "Escrows" below.
 - (8) Other Escrows represents (i) \$12,309,694 reserved for outstanding tenant obligations associated with 33 tenants and (ii) \$1,218,246 reserved for gap rent associated with five tenants.

■ **The Mortgage Loan.** The mortgage loan (the "Grand Canal Shoppes Loan") is part of a loan combination (the "Grand Canal Shoppes Loan Combination") evidenced by 24 notes comprised of (i) 23 senior *pari passu* notes (collectively,

the “**Grand Canal Shoppes Senior *Pari Passu* Notes**”) with an aggregate principal balance as of the Cut-off Date of \$760,000,000 and (ii) one subordinate note (the “**Grand Canal Shoppes Subordinate Companion Loan**”) with a principal balance as of the Cut-off Date of \$215,000,000. The Grand Canal Shoppes Subordinate Companion Loan is subordinate to the Grand Canal Shoppes Senior *Pari Passu* Notes as and to the extent described in “*Description of the Mortgage Pool—The Loan Combinations—The Grand Canal Shoppes *Pari Passu*-AB Loan Combination*” in the Preliminary Prospectus. The aggregate outstanding principal balance as of the Cut-off Date of all notes evidencing the Grand Canal Shoppes Loan Combination is \$975,000,000. The Grand Canal Shoppes Loan Combination is secured by a first priority fee simple and leasehold mortgage encumbering a 759,891 SF specialty retail center located in Las Vegas, Nevada (the “**Grand Canal Shoppes Property**”). The Grand Canal Shoppes Loan, which is evidenced by the non-controlling note A-3-1, has an outstanding balance as of the Cut-Off Date of \$50,000,000 and represents approximately 4.2% of Initial Pool Balance. The related senior companion loans are evidenced by 22 senior *pari passu* notes (collectively, the “**Grand Canal Shoppes *Pari Passu* Companion Loans**”), which have an aggregate outstanding principal balance as of the Cut-off Date of \$710,000,000, and the Grand Canal Shoppes Subordinate Companion Loan as detailed in the Loan Combination Summary table below. The Grand Canal Shoppes Loan Combination was co-originated by Morgan Stanley Bank, N.A. (“**MSBNA**”), JP Morgan Chase Bank, National Association (“**JPMCB**”), Wells Fargo Bank, N.A. (“**WFB**”) and Goldman Sachs Bank USA (“**GS**”) on June 3, 2019. The Grand Canal Shoppes Senior *Pari Passu* Notes have an interest rate of 3.74080% *per annum* and the Grand Canal Shoppes Subordinate Companion Loan has an interest rate of 6.25000% *per annum*. The Grand Canal Shoppes Borrowers (as defined below) utilized the proceeds of the Grand Canal Shoppes Loan Combination to pay off existing debt, fund reserves, return equity to the borrower sponsor and pay origination costs. The Grand Canal Shoppes Loan received a credit assessment of BBB-sf by Fitch and A- by Morningstar.

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LOAN #10: GRAND CANAL SHOPPES

Loan Combination Summary

Note	Original Balance	Cut-off Date Balance	Note Holder	Controlling Piece
A-1-1, A-1-6	\$70,000,000	\$70,000,000	MSC 2019-H7	Yes ⁽¹⁾
A-1-2	\$50,000,000	\$50,000,000	MSBNA	No
A-1-3	\$40,000,000	\$40,000,000	MSBNA	No
A-1-4	\$40,000,000	\$40,000,000	MSBNA	No
A-1-5	\$13,846,154	\$13,846,154	MSBNA	No
A-1-7	\$10,000,000	\$10,000,000	MSBNA	No
A-1-8	\$10,000,000	\$10,000,000	MSBNA	No
A-2-1	\$50,000,000	\$50,000,000	WFB	No
A-2-2	\$50,000,000	\$50,000,000	WFB	No
A-2-3	\$40,000,000	\$40,000,000	WFB	No
A-2-4	\$25,000,000	\$25,000,000	WFB	No
A-2-5	\$10,384,615	\$10,384,615	WFB	No
A-3-1	\$50,000,000	\$50,000,000	Benchmark 2019-B12	No
A-3-2	\$50,000,000	\$50,000,000	JPMCB	No
A-3-3	\$40,000,000	\$40,000,000	JPMCB	No
A-3-4	\$25,000,000	\$25,000,000	JPMCB	No
A-3-5	\$10,384,615	\$10,384,615	JPMCB	No
A-4-1	\$50,000,000	\$50,000,000	GSB	No
A-4-2	\$50,000,000	\$50,000,000	GSB	No
A-4-3	\$40,000,000	\$40,000,000	GSB	No
A-4-4	\$25,000,000	\$25,000,000	GSB	No
A-4-5	\$10,384,615	\$10,384,615	GSB	No
B-1	\$215,000,000	\$215,000,000	Third party holder	Yes ⁽¹⁾
Total	\$975,000,000	\$975,000,000		

(1) The holder of the Grand Canal Shoppes Subordinate Companion Loan will have the right to appoint the special servicer of the Grand Canal Shoppes Loan Combination and to direct certain decisions with respect to the Grand Canal Shoppes Loan Combination, unless a control appraisal event exists under the related co-lender agreement. The Grand Canal Shoppes Loan Combination will be serviced pursuant to the pooling and servicing agreement for the MSC 2019-H7 securitization.

The Grand Canal Shoppes Loan Combination had an initial term of 120 months, has a remaining term of 119 months as of the Cut-off Date and requires monthly payments of interest only for the term of the Grand Canal Shoppes Loan Combination. The scheduled maturity date of the Grand Canal Shoppes Loan Combination is the due date in July 2029. Provided no event of default has occurred and is continuing, at any time after the earlier to occur of (i) June 3, 2022 and (ii) the second anniversary of the last securitization of a note comprising part of the Grand Canal Shoppes Loan Combination, the Grand Canal Shoppes Loan Combination may be defeased with certain direct full faith and credit obligations of the United States of America or other obligations which are "government securities" permitted under the Grand Canal Shoppes Loan Combination documents. Voluntary prepayment of the Grand Canal Shoppes Loan Combination is permitted on or after the due date in March 2029 without payment of any prepayment premium.

The Mortgaged Property. The Grand Canal Shoppes Property is a 759,891 SF specialty retail center that predominantly comprises the first-, second-, and third-levels of The Venetian Hotel and Casino (the "**Venetian**") and Palazzo Resort and Casino (the "**Palazzo**"). The Grand Canal Shoppes Property opened in 1999, with an expansion completed in conjunction with the construction of The Palazzo in 2007, and is anchored by an 84,743 SF, three level Barneys New York, currently slated to close by January 2020. Barneys New York will be part of the collateral for the Grand Canal Shoppes Loan Combination as of the origination date; however, the Borrowers (as defined below) have the right to obtain a free release of the Barneys Parcel (as defined below) subject to certain conditions in the loan documents. At origination, no value or rental income was attributed to the Barneys Parcel.

The Grand Canal Shoppes Property is situated across 21.1 acres of land along the central portion of Las Vegas Boulevard (“**The Strip**”). The Grand Canal Shoppes Property is a premier shopping, entertainment and dining venue in Las Vegas featuring a unique Venetian-inspired setting with luxury retailers and restaurant concepts. Attractions include a gondola ride through the canals of the Grand Canal Shoppes Property (operated by Emporio D’Gondola), as well as showroom/theater space for live performances.

The Venetian and the Palazzo Resort are luxury hotels and casino resorts situated within the southeast quadrant of Las Vegas Boulevard and Sands Avenue. The Venetian and the Palazzo are owned and operated by Las Vegas Sands. The overall resort complex is the largest on The Strip and includes a combined 7,117 rooms and 225,000 SF of gaming space, none of which are collateral for the Grand Canal Shoppes Loan Combination. The Grand Canal Shoppes Property is physically connected to the Venetian and the Palazzo, which combine to create a large hotel and resort complex with over 7,000 hotel rooms, 2.3 million SF of meeting space, one million SF of retail space and more than 30 restaurants. In addition, the Grand Canal Shoppes Property is within walking distance to over 140,000 hotel rooms.

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LOAN #10: GRAND CANAL SHOPPES

The Grand Canal Shoppes Property is currently 94.0% leased as of May 31, 2019. The Grand Canal Shoppes Property generated \$427.6 million in gross sales with comparable in-line and food court sales of \$1,182 PSF as of the trailing twelve month period ending February 2019. The Grand Canal Shoppes Property generates over 60% of its top line revenue from food and entertainment offerings, including restaurants such as Tao Asian Bistro, featuring a night and beach club, Grand Lux Café, Sushi Samba, Delmonico Steakhouse, Cut by Wolfgang Puck, Smith & Wollensky, Verdugo West Brewery, Xiang Tian Xia Chinese Hot Pot and Recital Karaoke, among others. Noteworthy luxury retailers at the Grand Canal Shoppes Property include Louis Vuitton, Salvatore Ferragamo, Fendi and Jimmy Choo.

From 2015 through January 2019, capital expenditures, inclusive of development capital and landlord work, of approximately \$20.3 million (\$26.70 PSF) were invested in the Grand Canal Shoppes Property. In addition, there is a planned renovation and redevelopment of the common areas within the shopping areas above The Palazzo. Ownership is budgeting approximately \$12.0 million to improve lighting and finishes, in an attempt to maintain existing and attract new tenants to this portion of the Grand Canal Shoppes Property. According to management, renovations are expected to begin in September 2019. Additionally, in conjunction with the development of a 27,422 SF international food hall, certain renovations, new finishes and lighting are expected to be completed in 2020. Such renovation and redevelopment, as well as development of the new food hall, are not required by or reserved for under the Grand Canal Shoppes Loan documents, and we cannot assure you that any such renovation, redevelopment, or food hall development will be completed.

The Grand Canal Shoppes Property is anchored by 18 major tenants which combined generate approximately \$140.3 million in annual sales as of the trailing twelve month period ending February 2019. Since 2015, the Grand Canal Shoppes Property's sales performance has steadily increased year-over-year, growing 21.4% over this period. Furthermore, since 2015 comparable in-line and food court sales have consistently exceeded \$1,080 PSF and have reached \$1,182 PSF as of the trailing twelve month period ending February 2019.

- **Ground/Air Rights Leases.** A portion of the Grand Canal Shoppes Property, consisting of the first floor of Barneys New York and the ground floor space, is ground leased by Venetian Casino Resort, LLC, an affiliate of Las Vegas Sands Corporation, to the Borrowers. The ground floor space consists of restaurants and retail shops contained in the Venetian and the Palazzo. The ground lease for the casino level of the Venetian portion of the Grand Canal Shoppes Property, between Venetian Casino Resort, LLC and the Grand Canal Shoppes Borrower (as defined below), expires in 2093 (the "**Venetian Ground Lease**"), while the ground lease for the casino level of the Palazzo portion of the Grand Canal Shoppes Property, between Venetian Casino Resort, LLC and the Shoppes at the Palazzo Borrower (as defined below), expires in 2097 (the "**Palazzo Ground Lease**"). The annual rents for each of the foregoing ground leases is \$1 and each of the Borrowers has the option to purchase the premises for \$1 on each applicable expiration date.

The Shoppes at the Palazzo Borrower also ground leases a certain air rights parcel (the "**Walgreens Air Rights Space**"), pursuant to a certain commercial lease (the "**Walgreens Air Rights Lease**"); and, collectively, with the Venetian Ground Lease and the Palazzo Ground Lease, the "**Ground Leases**") between the Shoppes at the Palazzo Borrower, as lessee, and CAP II-Buccaneer, LLC, as lessor. The Walgreens Air Rights Lease requires an annual rent payment of \$600,000 for lease years one through seven, with annual escalation based on the Consumer Price Index (not to exceed 2%), and expires in 2064 with one 40-year extension option. The Walgreens Air Rights Space is currently occupied by Buddy V's Ristorante and Carlo's Bakery (12,839 SF, 1.5% of underwritten base rent). The Venetian subleases a portion of the air rights parcel from the Shoppes at the Palazzo Borrower pursuant to a separate sublease. The Venetian is responsible under its sublease for an amount equal to 80.68% of the ground rent under the Walgreens Air Rights Lease. The remaining collateral, except for the Walgreens air rights lease space, is owned in fee. A portion of the fee is located at the ground level (the retail annex), with the majority fee located on levels 2 and 3. The collateral is vertically subdivided (i.e., the fee ownership is solely of the designated space on the ground level and levels 2 and 3). A reciprocal easement agreement governs the relationship among the owners of the Grand Canal Shoppes Property, and the owners of other interests in the complex that includes the Venetian and the Palazzo.

The following table presents certain information relating to the major tenants (of which, certain tenants may have co-tenancy provisions) at the Grand Canal Shoppes:

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LOAN #10: GRAND CANAL SHOPPES

Largest Tenants Based on Underwritten Base Rent⁽¹⁾

Tenant Name	Credit Rating (Fitch/MIS/S&P) ⁽²⁾	Tenant GLA	% of GLA	UW Base Rent ⁽³⁾	% of Total UW Base Rent ⁽³⁾	UW Base Rent \$ per SF ⁽³⁾	Tenant Sales \$ per SF ⁽⁴⁾	Lease Expiration	Renewal / Extension Options
The Venetian Casino Resort ⁽⁵⁾	BBB-/NR/BBB-	81,105	10.7%	\$4,598,023	6.9%	\$56.69	NAV	5/31/2029	NAP
Emporio D'Gondola ⁽⁶⁾	NR/NR/NR	922	0.1	\$4,051,692	6.0	\$4,394.46	NAV	5/31/2029	NAP
Regis Galerie ⁽⁷⁾	NR/NR/NR	28,099	3.7	\$2,367,955	3.5	\$84.27	\$249	5/31/2025	NAP
Sephora	NR/NR/A+	10,074	1.3	\$2,299,995	3.4	\$228.31	NAV	7/31/2021	NAP
Welcome to Las Vegas ⁽⁸⁾	NR/NR/NR	14,234	1.9	\$2,000,502	3.0	\$140.54	\$465	12/31/2020	NAP
TAO Nightclub ⁽⁹⁾	NR/NR/NR	49,441	6.5	\$1,576,386	2.4	\$31.88	\$723	1/31/2025	NAP
Grand Lux Café	NR/NR/NR	19,100	2.5	\$1,463,633	2.2	\$76.63	\$1,151	12/31/2029	NAP
CUT By Wolfgang Puck	NR/NR/NR	12,247	1.6	\$1,261,441	1.9	\$103.00	\$1,157	5/31/2028	NAP
Mercato Della Pescheria	NR/NR/NR	16,479	2.2	\$1,131,448	1.7	\$68.66	\$556	11/30/2025	NAP
Bellusso Jewelry	NR/NR/NR	2,999	0.4	\$1,068,964	1.6	\$356.44	\$2,725	11/30/2022	NAP
Golden Gai	NR/NR/NR	12,820	1.7	\$1,034,959	1.5	\$80.73	NAV	12/31/2029	NAP
Peter Lik Gallery	NR/NR/NR	4,394	0.6	\$979,686	1.5	\$222.96	\$878	8/31/2021	NAP
Smith & Wollensky	NR/NR/NR	14,751	1.9	\$942,502	1.4	\$63.89	NAV	6/30/2028	NAP
Michael Kors	BBB-/NR/BBB-	4,066	0.5	\$917,907	1.4	\$225.75	\$803	1/31/2026	NAP
Recital Karaoke	NR/NR/NR	14,062	1.9	\$897,999	1.3	\$63.86	NAV	2/28/2029	NAP
Largest Tenant Totals		284,793	37.5%	\$26,593,092	39.7%	\$93.38			
Remaining Tenants		429,835	56.6%	\$40,441,789	60.3%	\$94.09			
Occupied Total		714,628	94.0%	\$67,034,881	100.0%	\$93.80			
Vacant Spaces		45,263	6.0%						
Totals / Wtd. Avg. All Tenants		759,891	100.0%						

- (1) Information is based on the underwritten rent roll dated May 31, 2019.
- (2) Certain ratings are those of the parent company whether or not the parent guarantees the lease.
- (3) UW Base Rent, % of Total UW Base Rent and UW Base Rent \$ per SF reflect the following: (a) in-place leases based on the May 2019 rent roll and (b) contractual rent steps of \$2,184,628 through May 31, 2020.
- (4) Tenant Sales \$ per SF are as of February 2029.
- (5) Venetian Casino Resort has (i) 34,088 SF expiring on July 31, 2025, (ii) 38,920 SF expiring on May 31, 2029, (iii) 8,096 SF expiring on September 30, 2033 and (iv) 1 SF expiring on December 31, 2019 that generates \$60,991 in underwritten base rent.
- (6) Operates the gondola attraction at the Grand Canal Shoppes Property.
- (7) Regis Galerie has (i) 8,406 SF expiring on December 31, 2020, (ii) 4,654 SF expiring on February 29, 2020, (iii) 15,039 SF expiring on May 31, 2025.
- (8) The Welcome to Las Vegas tenant has an additional lease that is expected to commence February 2020. Welcome to Las Vegas has (i) 10,239 SF expiring on December 31, 2020 and (ii) 3,995 SF expiring on January 31, 2030.
- (9) TAO has (i) 1,088 SF expiring on January 31 2020, (ii) 39,553 SF expiring on January 31, 2025 and (iii) 8,800 SF expiring May 31, 2029.

The following table presents certain information relating to the lease rollover schedule at the Grand Canal Shoppes Property based on initial lease expiration dates:

Lease Expiration Schedule⁽¹⁾⁽²⁾

Year Ending December 31	Expiring Owned GLA	% of Owned GLA	Cumulative % of Owned GLA	UW Base Rent ⁽³⁾	% of Total UW Base Rent	UW Base Rent \$ per SF	# of Expiring Leases
MTM ⁽⁴⁾	2,080	0.3%	0.3%	\$0	0.0%	\$0.00	2

2019	39,567	5.2	5.5	2,436,560	3.6	\$61.58	17
2020	80,052	10.5	16.0	4,475,224	6.7	\$55.90	25
2021	28,634	3.8	19.8	5,748,002	8.6	\$200.74	16
2022	35,084	4.6	24.4	4,683,674	7.0	\$133.50	13
2023	41,038	5.4	29.8	5,490,655	8.2	\$133.79	20
2024	60,412	8.0	37.8	6,381,261	9.5	\$105.63	22
2025	146,378	19.3	57.0	10,519,793	15.7	\$71.87	20
2026	29,721	3.9	60.9	2,751,933	4.1	\$92.59	9
2027	6,142	0.8	61.7	859,431	1.3	\$139.93	3
2028	48,011	6.3	68.1	4,940,574	7.4	\$102.91	9
2029	185,418	24.4	92.5	18,048,649	26.9	\$97.34	27
2030 & Thereafter	12,091	1.6	94.0	699,125	1.0	\$57.82	2
Vacant	45,263	6.0	100.0%	NAP	NAP	NAP	NAP
Total / Wtd. Avg.	759,891	100.0%		\$67,034,881	100.0%	\$93.80	185

- (1) Information is based on the underwritten rent roll.
- (2) Certain tenants may have lease termination options that are exercisable prior to the originally stated expiration date of the subject lease and that are not considered in the lease rollover schedule.
- (3) UW Base Rent reflects the following: (a) in-place leases based on the May 2019 rent roll and (b) contractual rent steps of \$2,184,628 through May 31, 2020.
- (4) MTM is inclusive of two storage units for specific tenants located across the Grand Canal Shoppes Property.

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LOAN #10: GRAND CANAL SHOPPES

The following tables presents certain information relating to historical occupancy and estimated tenant sales at the Grand Canal Shoppes Property:

Historical Occupancy

	2014	2015	2016	2017	2018	Current ⁽¹⁾
The Venetian Occupancy (%)	95.1%	92.6%	98.3%	95.7%	99.1%	97.1%
The Palazzo Occupancy (%)	88.2%	89.5%	86.2%	88.4%	83.0%	86.2%
Total Occupancy (%)	92.6%	91.5%	93.9%	93.0%	93.3%	94.0%

(1) Current occupancy is based on the May 31, 2019 underwritten rent roll.

Historical In-line Sales⁽¹⁾

	2015	2016	2017	2018	TTM February 2019 Sales	TTM February 2019 Sales PSF
Anchor/Major Sales ⁽²⁾	\$129,599,970	\$129,282,829	\$130,862,228	\$138,705,093	\$140,317,346	\$1,046
Comparable In-Line Sales	\$200,973,916	\$207,912,708	\$223,524,143	\$244,916,086	\$244,795,176	\$1,154
Comparable Food Court Sales	\$17,055,210	\$19,744,070	\$21,275,466	\$23,538,795	\$23,688,945	\$1,580

(1) Information as provided by the borrower sponsor and only includes tenants reporting sales.

(2) Anchor/Major Sales excludes all sales associated with Barney's New York.

■ **Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the Grand Canal Shoppes Property:

Cash Flow Analysis

	2016	2017	2018	TTM 3/31/ 2019	Underwritten	Underwritten \$ per SF
Base Rent ⁽¹⁾	\$68,255,204	\$67,507,328	\$66,471,558	\$66,941,590	\$64,850,253	\$85.34
Rent Steps	0	0	0	0	2,184,628	2.87
Total Recoveries	31,633,869	27,875,777	25,766,223	25,166,107	26,539,087	34.92
Other Income ⁽²⁾	12,765,993	12,203,223	10,872,872	10,365,738	10,455,366	13.76
Effective Gross Income	\$112,655,066	\$107,586,327	\$103,110,653	\$102,473,435	\$104,029,334	\$136.90
Real Estate Taxes	\$1,952,631	\$1,995,183	\$2,076,447	\$2,102,023	\$2,102,023	\$2.77
Insurance	268,881	248,826	253,530	260,040	260,040	0.34
Other Operating Expenses ⁽³⁾	31,074,924	30,916,371	29,454,203	28,645,562	28,645,562	37.70
Total Operating Expenses	\$33,296,436	\$33,160,381	\$31,784,180	\$31,007,624	\$31,007,624	\$40.81

Net Operating Income⁽¹⁾	\$79,358,630	\$74,425,947	\$71,326,473	\$71,465,811	\$73,021,709	\$96.09
Capital Expenditures	0	0	0	0	0	0.00
TI/LC	0	0	0	0	2,023,806	2.66
Net Cash Flow	\$79,358,630	\$74,425,947	\$71,326,473	\$71,465,811	\$70,997,903	\$93.43
Occupancy⁽⁴⁾	93.9%	93.0%	93.3%	93.9%	94.0%	
NOI Debt Yield⁽⁵⁾	10.4%	9.8%	9.4%	9.4%	9.6%	
NCF DSCR⁽⁵⁾	2.75x	2.58x	2.47x	2.48x	2.46x	

- UW Base Rent reflects the following: (a) in-place leases based on the March 2019 rent roll and (b) contractual rent steps of \$2,184,628 through
- (1) May 31, 2020. UW Base Rent excludes any rent associated with the Barneys New York space. The increase in UW Base Rent and Net Operating Income from TTM 3/31/2019 is due to recent leasing activity.
 - (2) Other Income includes vending income, enterprise income, advertising revenue sponsorship income, specialty leasing income, overage rent and percent in lieu.
Other Operating Expenses includes the applicable portion of Walgreens ground/air rights lease rent, which equates to \$133,475 (19.32% of the annual ground lease payment) was underwritten. The Venetian is responsible under its sublease for the remaining 80.68% of the ground rent under the Walgreens lease.
 - (3) 2016, 2017 and 2018 based on Q4 of each respective year. Underwritten Occupancy is based on the underwritten rent roll dated May 31, 2019.
 - (4) Debt service coverage ratios and debt yields are based on the Grand Canal Shoppes *Pari Passu* Companion Loans and exclude the Grand Canal Shoppes Subordinate Companion Loan.
 - (5)

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LOAN #10: GRAND CANAL SHOPPES

- **Appraisal.** According to the appraisal, the Grand Canal Shoppes Property had a “As-Is” appraised value of \$1,640,000,000 as of April 3, 2019.

<u>Appraisal Approach</u>	<u>“As-Is” Value⁽¹⁾</u>	<u>Discount Rate</u>	<u>Capitalization Rate</u>
Income Capitalization Approach	\$1,640,000,000	6.25%	4.34%

- (1) The “As-Is” Appraised Value of \$1,640,000,000 is exclusive of any value associated with the Barney’s New York space, which is expected to close in January 2020.

- **Environmental Matters.** Based on a Phase I environmental report dated May 15, 2019, the environmental consultant did not identify evidence of any recognized environmental conditions or recommendations for further action at the Grand Canal Shoppes Property.

- **Market Overview and Competition.** The Grand Canal Shoppes Property is located in Las Vegas, Nevada along The Strip. The Grand Canal Shoppes Property’s tenant mix of retail, restaurants and entertainment offerings benefits from Las Vegas’s significant number of tourists, convention center attendees and residents. The Grand Canal Shoppes Property is adjacent to the Sands Expo Convention Center, a 1.8 million SF meeting and convention center. Additionally, Las Vegas has various developments in process that are expected to be completed in 2020 and beyond. The most notable of these developments are the MSG Sphere, an 18,000 seat performance venue being developed by Madison Square Garden and Las Vegas Sands, which will be located just east of the Grand Canal Shoppes Property and the redevelopment of the Las Vegas Convention Center District, which will include 1.4 million SF of expansion space. Additionally, the construction of a 65,000 seat Las Vegas Stadium is already under development, which will be the new home of the NFL’s Oakland Raiders, as well as a live entertainment and convention venue. We cannot assure you as to whether or when such developments will be completed.

Primary access to the Grand Canal Shoppes Property is provided via Interstate 15, the region’s primary north-south route, situated approximately one mile west of the Grand Canal Shoppes Property. The Grand Canal Shoppes Property is located approximately 3 miles north of the McCarran International Airport and has direct access to Citizen Area Transit, which has over 41 routes running throughout the region. According to the appraisal, approximately 42.1 million visitors traveled to Las Vegas in 2018, of which approximately 6.5 million were associated with convention center activity. According to the appraisal, the estimated 2018 population within a five-, seven- and ten-mile radius of the Grand Canal Shoppes Property was 410,151, 911,414 and 1,661,641, respectively. The estimated 2018 average household income within a five-, seven- and ten-mile radius was \$54,257, \$60,146 and \$70,983, respectively.

The Grand Canal Shoppes Property is located in the Southeast submarket of the Las Vegas retail market. According to the appraisal, as of the fourth quarter of 2018, the Las Vegas retail market had inventory of approximately 29.9 million SF, the vacancy rate was approximately 13.4% and average asking rents were approximately \$22.34 PSF. According to the appraisal, as of the fourth quarter of 2018, the Southeast submarket had inventory of approximately 5.1 million SF, the vacancy rate was approximately 14.5% and average asking rents were approximately \$19.41 PSF. As of May 31, 2019, the Grand Canal Shoppes Property has an in-place asking rents of \$93.80 PSF, which is slightly below the appraiser concluded market rent of \$98.23 PSF for the space at the Grand Canal Shoppes Property.

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LOAN #10: GRAND CANAL SHOPPES

The following table presents certain information relating to the primary competition for the Grand Canal Shoppes Property:

Competitive Set⁽¹⁾

	Distance to Subject (mi.)	Property Type	Year Built/Renovated	Total GLA	Total Occupancy ⁽²⁾	Sales per SF ⁽³⁾	Anchors & Jr. Anchors
Grand Canal Shoppes	N/A	Specialty Retail	1999/2007	759,891	94.0%	\$1,182	TAO Nightclub, Theater, Grand Lux Café, Mercato Della Pescheria, TAO Asian Bistro, Recital Karaoke, Madame Tussaud Las Vegas, Verdugo West Brewery, Golden Gai
<u>Primary Competition</u>							
Forum Shops at Caesars	0.5	Fashion/Specialty	1992/1997,2004	650,000	99%	\$1,400-\$1,700	Upscale/themed retail project at Caesars with 1-2 levels
Wynn Las Vegas Retail	0.3	Fashion/Specialty	2005/2008	150,000	95%	\$2,000-\$3,000	Upscale retail areas located within The Wynn Las Vegas and Wynn Encore
The Shops at Crystals	1.1	Fashion/Specialty	2009/NAP	360,000	94%	\$1,200-\$1,400	Upscale specialty retail center with 3-levels on Las Vegas Strip part of City Center
Miracle Mile Shops	1.0	Fashion/Specialty	2000/2008,2016	494,000	93%	\$825-\$875	Mid-Tier specialty retail center with 1 and 2 stories at Planet Hollywood
Fashion Show Mall⁽⁴⁾	0.3	Super-Regional Center	1981/Various	1,875,400	95%	\$825-\$875	Neiman Marcus, Dillard's, Macy's, Saks, Forever 21, Nordstrom, Dick's Sporting Goods
<u>Secondary Competition</u>							
The Ling Promenade	0.4	Fashion/Specialty	2014/NAP	268,000	93%	---	Retail and entertainment specialty center including a number of restaurants and performance venues
Bellagio Shops	0.8	Fashion/Specialty	1998/NAP	---	100%	---	Upscale shopping area located within Bellagio Resort and Casino
The Showcase	1.6	Specialty Retail	1997/2003,2009	347,281	97%	---	Coca-Cola, Ross, Hard Rock, M&M's, Adidas
Las Vegas Premium Outlets	3.5	Outlet Center	2003/NAP	676,113	100%	\$1,400-\$1,600	Last Call Neiman Marcus, Off 5th Saks 5th Avenue, Nike

(1) Source: Appraisal.

(2) Occupancy as of May 31, 2019.

(3) Comparable in-line and food court sales shown as of February 28, 2019.

(4) Owned by an affiliate of the Borrowers.

The Borrower. The borrowers are Grand Canal Shops II, LLC (the “**Grand Canal Shoppes Borrower**”) and The Shoppes at the Palazzo, LLC (the “**Shoppes at the Palazzo Borrower**”; and together with the Grand Canal Shoppes Borrower, the “**Borrowers**”), each organized as a Delaware limited liability company and each structured to be bankruptcy remote with two independent directors. The borrower sponsor is Grand Canal Shoppes Holdings, LLC and the nonrecourse carveout guarantor is BPR Nimbus LLC (the “**Grand Canal Shoppes Guarantor**”), an affiliate of Brookfield Properties REIT Inc. Brookfield Properties REIT Inc. ranks among the largest retail real estate companies in the United States. Its portfolio of mall properties spans the nation, encompassing 170 locations across 42 states and representing over 146 million SF of retail space. The company is focused on managing, leasing and redeveloping retail properties. Nuveen Real Estate is the investment management arm of Teachers Insurance and Annuity Association. Nuveen Real Estate manages various funds and mandates, across both public and private investments, and spanning both debt and equity and has over 80 years of real estate investing experience and more than 500 employees located across over 20 cities throughout the United States, Europe and Asia Pacific.

Escrows. At loan origination, the Borrowers were required to deposit \$1,218,246 for outstanding gap rents and \$12,309,694 for outstanding tenant improvements and leasing commissions obligations, including among other tenants: \$1,177,693 for Recital Karaoke, \$1,472,330 for Verdugo West Brewery, \$967,269 for Golden Gai, \$63,000 for CUT By Wolfgang Puck, \$882,000 for Smith & Wollensky and \$20,000 for Once.

Real Estate Taxes and Insurance Reserves – During the continuance of a Cash Management Period (as defined below), the Grand Canal Shoppes Borrowers are required to reserve monthly 1/12th of the estimated annual property taxes and 1/12th of the estimated annual insurance premiums. The monthly insurance reserve requirement is also waived if the Grand Canal Shoppes Borrowers provide the lender with evidence that (a) the insurance policies required to be maintained by the Borrowers are maintained pursuant to blanket policies that comply with the requirements of the Grand Canal Shoppes Loan Combination documents and (b) the insurance premiums payable in

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LOAN #10: GRAND CANAL SHOPPES

connection with such policies have been prepaid for not less than one year in advance (or, for the period of coverage under the policies as to which certificates are delivered at closing, such period, if less than one year).

Replacements Reserve – During the continuance of a Cash Management Period, the Borrowers are required to reserve monthly \$16,122 for a replacement reserve. However, the Borrowers will not be required to make any portion of the monthly recurring replacement deposit if the amount then on deposit in the recurring replacement reserve is equal to or exceeds \$386,928.

TI/LC Reserve – During the continuance of a Cash Management Period, the Borrowers are required to reserve monthly an amount equal to \$96,731 for a TI/LC reserve. However, the Borrowers will not be required to make any portion of the monthly TI/LC reserve deposit if the amount then on deposit in the TI/LC reserve is equal to or exceeds \$2,321,544.

Ground Rent Reserve – During the continuance of a Cash Management Period, the Borrowers are required to reserve monthly 1/12th of the annual amounts due by each of the Borrowers, as applicable, under the ground leases.

Lockbox and Cash Management. The Grand Canal Shoppes Loan Combination is structured with a hard lockbox and springing cash management. The Borrowers are required to direct each tenant of the Grand Canal Shoppes Property to deposit all funds (other than Non-Core Income (as defined below)) directly into the lockbox account, and to deposit any funds received by the Borrowers and property manager, notwithstanding such direction, into the lockbox account within two business days of receipt. Within two business days of written notification of the commencement of a Cash Management Period, the Borrowers are required to establish a lender-controlled cash management account with a cash management bank, into which all funds in the lockbox account will be required to be deposited periodically so long as a Cash Management Period is continuing. So long as a Cash Management Period is continuing, funds in the cash management account are required to be applied (i) to make deposits into the real estate taxes and insurance reserves (if then required) as described above under “—Escrows”, (ii) to make deposits into the ground rent reserve as described above under “—Escrows” (iii) to pay debt service on the Grand Canal Shoppes Loan Combination, (iv) provided no event of default under the Grand Canal Shoppes Loan Combination is continuing as to which the lender has initiated an enforcement action, to pay operating expenses set forth in the annual budget (which is required to be approved by the lender) and extraordinary operating or capital expenses reasonably approved by the lender, (v) to make deposits into the recurring replacement reserve and the TI/LC reserve, as described above under “Escrows,” (vi) in the event a Cash Sweep Period is continuing, to deposit any excess amount remaining in the lockbox account into an excess cash flow account to be held by the lender as additional security for the Grand Canal Shoppes Loan Combination during the continuance of the Cash Sweep Period and (vii) if no Cash Sweep Period and no event of default under the Grand Canal Shoppes Loan Combination are continuing, all funds in the lockbox account are required to be disbursed to the Borrowers.

A “**Cash Sweep Period**” will commence upon the occurrence of (i) an event of default under the Grand Canal Shoppes Loan Combination and ending if such event of default is cured or waived; (ii) the determination that the debt yield is less than 6.0% as of the end of any calendar year and ending upon the date that the debt yield is equal to or in excess of 6.0% for two consecutive calendar quarters.

A “**Cash Management Period**” will commence upon the occurrence of (i) an event of default under the Grand Canal Shoppes Loan Combination and ending if such event of default is cured or waived or (ii) the determination that the debt yield is less than 6.5% as of the end of any calendar year and ending upon the date that the debt yield is equal to or in excess 6.5% for two consecutive calendar quarters.

“**Non-Core Income**” means (i) certain de minimis amounts of rents received directly by the Borrowers from miscellaneous revenue items such as holiday photos and change retrieved from fountains (but excluding rent from Seasonal Leases) and (ii) certain rents generated pursuant to multi-property sponsorship and advertising programs which are directly attributable to the Grand Canal Shoppes Property.

“**Seasonal Leases**” means leases and/or license agreements having a maximum term of one year or less.

- **Property Management.** The Grand Canal Shoppes Property is managed by Brookfield Properties Retail Inc.

- **Current Mezzanine or Secured Subordinate Indebtedness.** Concurrently with the funding of the Grand Canal Shoppes Loan, JPMCB, MSBNA, WFB, and GS funded a subordinate loan in the amount of \$215.0 million, evidenced by the Grand Canal Shoppes Subordinate Companion Loan. The Grand Canal Shoppes Subordinate Companion

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LOAN #10: GRAND CANAL SHOPPES

Loan carries an interest rate of 6.25000% per annum and is co-terminus with the Grand Canal Shoppes Senior *Pari Passu* Companion Loans. The Grand Canal Shoppes Loan is subject to an intercreditor agreement. Based on the total combined debt of \$975.0 million, the Cut-off Date LTV Ratio, Maturity Date LTV Ratio, DSCR based on underwritten NCF and Debt Yield based on UW NOI are illustrated below.

Financial Summary

	<u>Grand Canal Shoppes Senior <i>Pari Passu</i> Loans</u>	<u>Grand Canal Shoppes Loan Combination</u>
Cut-off Date Balance	\$760,000,000	\$975,000,000
Cut-off Date LTV Ratio ⁽¹⁾	46.3%	59.5%
Maturity Date LTV Ratio ⁽¹⁾	46.3%	59.5%
DSCR Based on Underwritten NCF	2.46x	1.67x
Debt Yield Based on Underwritten NOI	9.6%	7.5%

(1) The Cut-Off Date LTV Ratio and Maturity Date LTV Ratio are based on the "As-Is" Appraised Value of \$1,640,000,000 which is exclusive of any value associated with the Barney's New York space, which is expected to close in January 2020.

■ **Future Mezzanine or Subordinate Indebtedness.** Not permitted.

Release of Collateral. The Borrowers may obtain the release of a portion of the Grand Canal Shoppes Property comprised of the approximately 84,743 SF, three level space currently demised to Barneys New York (the "**Barneys Parcel**") pursuant to a lease, which is expected to expire on January 31, 2020, upon a bona fide third-party sale to a third party not affiliated with the Borrowers or the Grand Canal Shoppes Guarantor, provided that, among other things, and in accordance with the Grand Canal Shoppes Loan Combination documents: (i) no event of default has occurred and is continuing, (ii) the lender has received reasonably satisfactory evidence that all portions of the Barneys Parcel owned by the Borrowers in fee simple have been legally subdivided from all portions of the Grand Canal Shoppes Property remaining after the release, (iii) upon request by the lender, the Borrowers delivered a legal opinion stating that the release does not constitute a "significant modification" of the Grand Canal Shoppes Loan Combination under Section 1001 of the Internal Revenue Code of 1986 or otherwise cause a tax to be imposed on a "prohibited transaction" by any REMIC Trust, (iv) following such release, the LTV (as determined by the lender in its sole discretion using only the portion of the remaining Grand Canal Shoppes Property which constitutes acceptable real estate collateral under the Code for a REMIC Trust) is equal to or less than 125% (provided that the Borrowers may prepay the "qualified amount" as that term is defined in the Internal Revenue Service Revenue Procedure 2010-30, as the same may be amended, modified or supplemented from time to time, in order to meet the foregoing loan-to-value ratio). From and after the release of the Barneys Parcel, without the prior consent of the lender, neither the Borrowers nor any of their affiliates may solicit, cause or facilitate the relocation of any existing tenant at the Grand Canal Shoppes Property to the Barneys Parcel.

■ **Right of First Offer/Right of First Refusal.** Pursuant to the Ground Leases and the reciprocal easement agreement (the "**REA**") by and between, among other parties, the Borrowers and The Venetian Casino Resort, and to which the Grand Canal Shoppes Property is subject, a transfer of either the Grand Canal Shoppes portion or the Palazzo Shoppes portion of the Grand Canal Shoppes Property (other than to a lender in connection with foreclosure or delivery of a deed-in-lieu of foreclosure of a mortgage secured by the Grand Canal Shoppes Property or the first subsequent transferee from the lender) is subject to a right of first offer in favor of The Venetian Casino Resort.

Additionally, under the REA, in the case of acceleration of the Grand Canal Shoppes Loan Combination, The Venetian Casino Resort has the right, subject to the satisfaction of certain financial covenants, to purchase the Grand Canal Shoppes Loan Combination at a price equal to the total of (a) the outstanding principal balance of the Grand Canal Shoppes Loan Combination, (b) any accrued and unpaid interest up to (but excluding) the date of purchase, (c) all other amounts owed under the loan documents, including, without limitation (but only to the extent so owed) (1) any unreimbursed advances made by the servicer, with interest at the applicable rate, (2) any servicing and special servicing fees, (3) any exit fees, (4) any prepayment, yield maintenance or similar premiums and (5) if the date of purchase is not a scheduled payment date, any accrued and unpaid interest, from the date of purchase up to (but excluding) the scheduled

payment date next succeeding the date of purchase and (d) all reasonable fees and expenses incurred by the lender in connection with the purchase.

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LOAN #10: GRAND CANAL SHOPPES

Terrorism Insurance. The Grand Canal Shoppes Loan Combination documents require that the comprehensive “special perils” insurance policy required to be maintained by the Borrowers provide coverage in an amount equal to the “full replacement cost” of the Grand Canal Shoppes Property. The Grand Canal Shoppes Loan Combination documents also require business income insurance covering no less than the 24-month period commencing at the time of casualty, together with a 12-month extended period of indemnity. Notwithstanding the foregoing, for so long as the Terrorism Risk Insurance Act of 2002, as extended and modified by the Terrorism Risk Insurance Program Reauthorization Act of 2007 and by the Terrorism Risk Insurance Program Reauthorization Act of 2015 (“**TRIPRA**”) is in effect (including any extensions thereof or if another federal governmental program is in effect relating to “acts of terrorism” which provides substantially similar protections as TRIPRA), and covers both domestic and foreign acts of terrorism, the lender is required to accept terrorism insurance which insures against “covered acts” as defined by TRIPRA (or such other program); provided, however, that the Borrowers will not be obligated to pay terrorism insurance premiums in excess of two times the premium for the “special perils” and business income coverage (excluding any effect of earthquake insurance or terrorism insurance components of such policies) and allocable to the Grand Canal Shoppes Property based on market rates in any policy year, and if the cost of coverage exceeds such cap, the Borrowers are required to purchase the maximum amount of terrorism insurance available with funds equal to the cap. See “*Risk Factors—Terrorism Insurance May Not Be Available for All Mortgaged Properties*” in the Preliminary Prospectus.

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LOAN #11: CIRE EQUITY RETAIL & INDUSTRIAL PORTFOLIO

Mortgaged Property Information	
Number of Mortgaged Properties	11
Location (City/State) ⁽¹⁾	Various / Various
Property Type ⁽¹⁾	Various
Size (SF)	1,190,355
Total Occupancy ⁽²⁾	91.4%
Owned Occupancy ⁽²⁾	91.4%
Year Built / Latest Renovation ⁽¹⁾	Various / Various
Appraised Value ⁽¹⁾⁽³⁾	\$198,100,000
Appraisal Date ⁽¹⁾⁽³⁾	4/29/2019
Borrower Sponsor ⁽⁴⁾	Josh Volen and Trevor Smith
Property Management	CIRE Investment Services, Inc.
Underwritten Revenues	\$17,894,164
Underwritten Expenses	\$4,772,257
Underwritten Net Operating Income (NOI)	\$13,121,906
Underwritten Net Cash Flow (NCF)	\$12,303,298
Cut-off Date LTV Ratio ⁽⁵⁾	64.9%
Maturity Date LTV Ratio ⁽⁵⁾	64.9%
DSCR Based on Underwritten NOI / NCF ⁽⁵⁾	2.43x / 2.28x
Debt Yield Based on Underwritten NOI / NCF ⁽⁵⁾	10.2% / 9.6%

Mortgage Loan Information		
Loan Seller	GACC	
Cut-off Date Balance ⁽⁶⁾	\$50,000,000	
Cut-off Date Balance per SF ⁽⁵⁾	\$108.03	
Percentage of Initial Pool Balance	4.2%	
Number of Related Mortgage Loans	None	
Type of Security	Fee Simple	
Mortgage Rate	4.13900%	
Original Term to Maturity (Months)	120	
Original Amortization Term (Months)	NAP	
Original Interest Only Period (Months)	120	
First Payment Date	7/6/2019	
Maturity Date	6/6/2029	
Escrows		
	Upfront	Monthly
Taxes	\$323,078	\$161,539
Insurance	\$0	\$0
Replacement	\$301,104	\$20,994
TI/LC	\$589,027	\$93,310
Other ⁽⁷⁾	\$223,574	\$0

Sources and Uses

Sources	\$	%	Uses	\$	%
Loan Combination	\$128,600,000	100.0%	Loan Payoff	\$101,632,278	79.0%
			Closing Costs	2,569,664	2.0
			Reserves	1,436,784	1.1
			Principal Equity Distribution	22,961,274	17.9
Total Sources	\$128,600,000	100.0%	Total Uses	\$128,600,000	100.0%

- (1) See the "Portfolio Summary" chart below for the Property Type, Year Built / Latest Renovation and Appraised Values of the individual CIRE Equity Retail & Industrial Portfolio properties.
- (2) Total Occupancy and Owned Occupancy are as of May 1, 2019 for the retail properties and August 6, 2019 for the industrial properties. On a portfolio basis, the CIRE Equity Retail & Industrial Portfolio properties have an aggregate "as portfolio" appraised value of \$198,100,000. On a stand-alone basis, the 11 CIRE Equity Retail & Industrial Portfolio properties have an aggregate "as-is" appraised value of \$188,710,000.
- (3) The Cut-off Date LTV Ratio and the LTV Ratio at Maturity based on the CIRE Equity Retail & Industrial Portfolio Whole Loan and the aggregate stand-alone "as-is" appraised value of \$188,710,000 are 68.1% and 68.1%, respectively.
- (4) The guarantors for the CIRE Equity Retail & Industrial Portfolio Loan Combination are Josh Volen, Trevor Smith and CIRE OPCO I, LLC.
- (5) Calculated based on the aggregate outstanding principal balance as of the Cut-off Date of the CIRE Equity Retail & Industrial Portfolio Loan Combination. The Cut-off Date Balance of \$50,000,000 represents the controlling Note A-1 (\$30,000,000) and non-controlling A-2-1 (\$20,000,000), which, together with the non-controlling *pari passu* Note A-2-2 (\$5,000,000), Note A-3 (\$22,160,000), Note A-4 (\$22,000,000), Note A-5 (\$20,000,000) and Note A-6 (\$9,440,000), with an aggregate original principal balance of \$128,600,000, comprise a loan combination (the "CIRE Equity Retail & Industrial Portfolio Loan Combination").
- (7) Other Upfront reserves consists of \$171,330 for immediate repairs and \$52,244 for rent concession funds.

The following table presents certain information relating to the individual CIRE Equity Retail & Industrial Portfolio properties:

CIRE Equity Retail & Industrial Portfolio Summary

<u>Property Name</u>	<u>City</u>	<u>State</u>	<u>Property Type</u>	<u>Year Built/ Renovated</u>	<u>Net Rentable Area (SF)</u>	<u>Occupancy⁽¹⁾</u>	<u>Allocated Cut-off Date Whole Loan Balance</u>	<u>% of Portfolio Cut-off Date Balance</u>	<u>Appraised Value⁽²⁾</u>
Wood Village Town Center	Wood Village	Oregon	Retail	2006/NAP	137,105	94.1%	\$21,193,683	16.5%	\$31,100,000
Pecan Promenade	Tolleson	Arizona	Retail	2006/NAP	141,485	88.5%	\$19,701,266	15.3%	\$28,910,000
Valley Plaza	Tempe	Arizona	Retail	1991/NAP	147,526	94.7%	\$17,922,633	13.9%	\$26,300,000
Pear Tree	Ukiah	California	Retail	1977/1998	194,241	92.3%	\$16,695,989	13.0%	\$24,500,000
Glendale Market Square	Glendale	Arizona	Retail	1988/NAP	185,907	92.8%	\$15,810,079	12.3%	\$23,200,000
Central Park Shopping Center	Denver	Colorado	Retail	1986/NAP	147,563	95.1%	\$14,378,994	11.2%	\$21,100,000
Val Vista Towne Center	Gilbert	Arizona	Retail	2000/NAP	95,248	63.0% ⁽²⁾	\$12,675,322	9.9%	\$18,600,000
2641 Hall Ave - Riverside, CA	Riverside	California	Industrial	1987, 2013/ NAP	34,982	100.0%	\$3,740,992	2.9%	\$5,489,310
606 W Troy - Indianapolis, IN	Indianapolis	Indiana	Industrial	1967/1989	22,860	100.0%	\$2,794,023	2.2%	\$4,100,000
Homeland - Bartow, FL	Bartow	Florida	Industrial	1983/NAP	67,438	100.0%	\$1,976,260	1.5%	\$2,900,000
2621 Hall Ave - Riverside, CA	Riverside	California	Industrial	1990/NAP	16,000	100.0%	\$1,710,760	1.3%	\$2,510,690
Total/Weighted Average					1,190,355	91.4%	\$128,600,000	100.0%	\$198,100,000

Goodwill and CoreYoga have provided letters of intent for 23,848 SF and 3,200 SF of space at the Val Vista Towne Center property, respectively.

- (1) Including these tenants, occupancy at the Val Vista Towne Center property would be 93.3% as of May 1, 2019. Staples vacated 23,848 SF of the Val Vista Towne Center property in 2017.
- (2) The aggregate Appraised Value for each CIRE Equity Retail & Industrial Portfolio properties represents the "as-is" appraised value on a stand-alone basis. Total Appraised Value is based on the portfolio "as portfolio" appraised value of \$198,100,000.

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LOAN #11: CIRE EQUITY RETAIL & INDUSTRIAL PORTFOLIO

Most Recent Occupancy Summary⁽¹⁾

	2016	2017	2018	Most Recent ⁽²⁾
Owned Space	93.7%	92.9%	90.5%	91.4%

(1) As provided by the borrower and which represents occupancy as of December 31 for the indicated year unless otherwise specified.

(2) As of May 1, 2019 for the Retail Properties and August 6, 2019 for the Industrial Properties.

The following table presents certain information relating to the major tenants (of which certain tenants may have co-tenancy provisions) at the CIRE Equity Retail & Industrial Portfolio properties:

Ten Largest Owned Tenants Based on Underwritten Base Rent⁽¹⁾

Tenant Name	Credit Rating (Fitch/MIS/ S&P) ⁽²⁾	Tenant GLA	% of Owned GLA	UW Base Rent	% of Total UW Base Rent	UW Rent \$ per SF	Lease Expiration	Renewal / Extension Options ⁽³⁾
Ross Stores ⁽³⁾	NR / A2 / A-	108,939	9.2%	\$1,109,064	8.6%	\$10.18	Various	Various
Kohl's Department Stores	BBB / Baa2 / BBB	87,501	7.4	1,100,004	8.5	\$12.57	1/31/2027	8, 5-year options
48 Forty Solutions ⁽⁴⁾⁽⁵⁾	NR / NR / NR	141,280	11.9	960,444	7.4	\$6.80	Various	2, 5-year options
Floor & Décor	NR / NR / NR	75,000	6.3	525,000	4.1	\$7.00	4/30/2028	NAP
US Foods	NR / NR / NR	60,145	5.1	449,464	3.5	\$7.47	3/31/2024	3, 5-year options
Lina Home Furnishings	NR / NR / NR	45,000	3.8	432,000	3.3	\$9.60	11/30/2024	NAP
LA Fitness	NR / NR / NR	27,564	2.3	431,244	3.3	\$15.65	11/30/2029	3, 5-year options
ARC Thrift Store	NR / NR / NR	29,294	2.5	279,756	2.2	\$9.55	5/31/2025	1, 5-year option
Starbucks	NR / NR / NR	7,025	0.6	246,336	1.9	\$35.07	9/30/2026	4, 5-year options
Petco	NR / NR / NR	13,221	1.1	223,968	1.7	\$16.94	1/31/2022	1, 5-year option
Largest Owned Tenants		594,969	50.0%	\$5,757,280	44.4%	\$9.68		
Remaining Owned Tenants		492,509	41.4%	7,205,030	55.6%	\$14.63		
Vacant		102,877	8.6%	0				
Total / Wtd. Avg. All Owned Tenant		1,190,355	100.0%	\$12,962,310				

(1) Based on the underwritten rent rolls dated May 1, 2019 for Retail Properties and August 6, 2019 for Industrial Properties.

(2) Certain ratings are those of the parent company whether or not the parent guarantees the lease.

Ross Stores has four leases at the CIRE Equity Retail & Industrial Portfolio Properties. The lease at the Pecan Promenade property (30,187 SF) expires on January 31, 2022 with three, five-year renewal options. The lease at the Valley Plaza property (27,650 SF) expires on January 31, 2021 with four, five-year renewal options. The lease at the Val Vista Towne Center property (25,126 SF) expires on January 31, 2022 with two, five-year renewal options. The lease at the Pear Tree property (25,976 SF) expires on January 30, 2025 with no renewal options.

48 Forty Solutions has four leases at the CIRE Equity Retail & Industrial Portfolio Properties. The lease at the Homeland - Bartow, FL property (67,438 SF) expires on June 30, 2025 with two, five-year renewal options. The leases at the 2641 Hall Ave - Riverside, CA property (34,982 SF) and the 2621 Hall Ave - Riverside, CA property (16,000 SF) expire May 31, 2023. The lease at the 606 W Troy - Indianapolis, IN property (22,860 SF) expires on April 30, 2024.

48 Forty Solutions has a one-time option to terminate its lease at the Homeland - Bartow, FL property effective July 1, 2022 with at least 12 months' written notice and a termination fee of \$500,000 plus any unamortized capital expenditure allowance amortized over a 60-month term at 12% *per annum*. 48 Forty Solutions has an option to terminate its lease at the 2641 Hall Ave - Riverside, CA property, the 2621 Hall Ave - Riverside, CA property

and the 606 W Troy - Indianapolis, IN property if capital expenditures are required as a result of the specific and unique use of the premises during the last two years of its lease and the cost thereof exceeds six months' base rent. 48 Forty Solutions may terminate the lease unless the landlord notifies 48 Forty Solutions, in writing, within 10 days after receipt of the termination notice that the landlord has elected to pay the difference between the actual cost thereof and an amount equal to six months' base rent. If 48 Forty Solutions is unable to finance the landlord's share of capital expenditures or if the balance of the base rent due and payable for the remainder of the lease is not sufficient to fully reimburse 48 Forty Solutions on an offset basis, 48 Forty Solutions will have the right to terminate its lease.

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LOAN #11: CIRE EQUITY RETAIL & INDUSTRIAL PORTFOLIO

The following table presents certain information relating to the lease rollover schedule at the CIRE Equity Retail & Industrial Portfolio properties, based on initial lease expiration dates:

Lease Expiration Schedule⁽¹⁾⁽²⁾

<u>Year Ending December 31</u>	<u>Expiring Owned GLA</u>	<u>% of Owned GLA</u>	<u>Cumulative % of Owned GLA</u>	<u>UW Base Rent</u>	<u>% of Total UW Base Rent</u>	<u>UW Base Rent \$ per SF</u>	<u># of Expiring Tenants</u>
MTM	3,715	0.3%	0.3%	\$96,972	0.7%	\$26.10	3
2019	25,238	2.1	2.4%	467,413	3.6%	\$18.52	11
2020	62,326	5.2	7.7%	1,181,744	9.1%	\$18.96	25
2021	79,666	6.7	14.4%	1,518,957	11.7%	\$19.07	25
2022	132,091	11.1	25.5%	1,950,560	15.0%	\$14.77	26
2023	114,889	9.7	35.1%	1,385,319	10.7%	\$12.06	18
2024	274,340	23.0	58.2%	2,345,164	18.1%	\$8.55	20
2025	151,617	12.7	70.9%	962,604	7.4%	\$6.35	4
2026	13,874	1.2	72.1%	261,108	2.0%	\$18.82	3
2027	101,024	8.5	80.5%	1,317,480	10.2%	\$13.04	6
2028	93,735	7.9	88.4%	878,388	6.8%	\$9.37	6
2029	34,963	2.9	91.4%	596,602	4.6%	\$17.06	6
2030 & Thereafter	0	0.0	91.4%	0	0.0%	\$0.00	0
Vacant	102,877	8.6	100.0%	NAP	NAP	NAP	NAP
Total / Wtd. Avg.	1,190,355	100.0%		\$12,962,310	100.0%	\$11.92	153

(1) Calculated based on the approximate SF occupied by each collateral tenant.

(2) Certain tenants may have lease termination options that are exercisable prior to the originally stated expiration date of the subject lease and that are not considered in the Lease Expiration Schedule.

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LOAN #11: CIRE EQUITY RETAIL & INDUSTRIAL PORTFOLIO

- Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the CIRE Equity Retail & Industrial Portfolio properties:

Cash Flow Analysis⁽¹⁾

	2016	2017	2018	TTM 2/28/2019	Underwritten	Underwritten \$ per SF
Rents in Place	\$10,595,213	\$10,679,433	\$12,599,494	\$12,891,042	\$12,962,310	\$10.89
Straight Line Rent ⁽²⁾	0	0	0	0	8,500	0.01
Contractual Rent Steps ⁽³⁾	0	0	0	0	184,122	0.15
Grossed Up Vacant Space	0	0	0	0	2,162,622	1.82
Gross Potential Rent	\$10,595,213	\$10,679,433	\$12,599,494	\$12,891,042	\$15,317,554	\$12.87
Other Income	148,514	88,502	223,333	141,968	223,333	0.19
Total Recoveries	3,386,438	3,854,446	4,454,903	4,528,586	4,615,869	3.88
Net Rental Income	\$14,130,165	\$14,622,381	\$17,277,730	\$17,561,596	\$20,156,756	\$16.93
(Vacancy & Credit Loss)	0	0	0	0	(2,262,592) ⁽⁴⁾	(1.90)
Effective Gross Income	\$14,130,165	\$14,622,381	\$17,277,730	\$17,561,596	\$17,894,164	\$15.03
Real Estate Taxes	1,603,665	1,650,070	1,980,398	2,022,699	2,022,699	1.70
Insurance	215,562	184,687	180,410	182,311	123,327	0.10
Management Fee	506,665	509,356	591,337	590,090	609,650	0.51
Other Operating Expenses	1,567,919	1,716,373	1,864,826	1,899,715	2,016,581	1.69
Total Operating Expenses	\$3,893,811	\$4,060,487	\$4,616,971	\$4,694,815	\$4,772,257	\$4.01
Net Operating Income⁽⁵⁾	\$10,236,354	\$10,561,894	\$12,660,759	\$12,866,781	\$13,121,906	\$11.02
Replacement Reserves	0	0	0	0	223,431	0.19
TI/LC	0	0	0	0	595,178	0.50
Net Cash Flow	\$10,236,354	\$10,561,894	\$12,660,759	\$12,866,781	\$12,303,298	\$10.34
Occupancy	93.7%	92.9%	90.5%	91.4%	88.8%	
NOI Debt Yield⁽⁶⁾⁽⁷⁾	8.0%	8.2%	9.8%	10.0%	10.2%	
NCF DSCR⁽⁶⁾⁽⁷⁾	1.90x	1.96x	2.35x	2.38x	2.28x	

Certain items such as straight line rent, interest expense, interest income, lease cancellation income, depreciation, amortization, debt service payments and any other non-recurring or non-operating items were excluded from the historical presentation and are not considered for the underwritten cash flow.

(2) Represents straight line rent averaging for investment grade tenant Starbucks.

(3) Represents contractual rent steps through June 2020.

(4) The underwritten economic vacancy is 11.2%. The CIRE Equity Retail & Industrial Portfolio Properties were 91.4% leased as of May 1, 2019 for the Retail Properties and August 6, 2019 for the Industrial Properties.

(5) The 2018 Net Operating Income increased compared to the 2017 Net Operating Income due to the acquisition of the Val Vista Towne Center property and the Pear Tree property in 2017 and the Wood Village Town Center property in 2018.

(6) The debt service coverage ratios and debt yields are based on the CIRE Equity Retail & Industrial Portfolio Loan Combination.

(7) 2016 & 2017 NOI Debt Yield and NCF DSCR's are calculated excluding the Wood Village Town Center Property.

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LOAN #12: WATERFRONT PLAZA

Mortgaged Property Information	
Number of Mortgaged Properties	1
Location (City/State)	Honolulu / Hawaii
Property Type	Mixed Use
Size (SF)	543,346
Total Occupancy as of 1/31/2019	96.3%
Owned Occupancy as of 1/31/2019	96.3%
Year Built / Latest Renovation	1989 / 2006
Appraised Value ⁽¹⁾	\$170,000,000
Appraisal Date	2/1/2021
Borrower Sponsor	Jay H. Shidler
Property Management	Parallel Capital Partners, Inc.
Underwritten Revenues	\$28,658,662
Underwritten Expenses	\$15,035,447
Underwritten Net Operating Income (NOI)	\$13,623,215
Underwritten Net Cash Flow (NCF)	\$12,768,971
Cut-off Date LTV Ratio ⁽¹⁾⁽²⁾	73.3%
Maturity Date LTV Ratio ⁽¹⁾⁽²⁾	53.8%
DSCR Based on Underwritten NOI / NCF ⁽²⁾	1.65x / 1.54x
Debt Yield Based on Underwritten NOI / NCF ⁽²⁾	10.9% / 10.3%

Mortgage Loan Information		
Loan Seller	GACC	
Cut-off Date Balance ⁽³⁾	\$49,822,682	
Cut-off Date Balance per SF ⁽²⁾	\$229.24	
Percentage of Initial Pool Balance	4.2%	
Number of Related Mortgage Loans	None	
Type of Security	Leasehold	
Mortgage Rate	4.41500%	
Original Term to Maturity (Months)	120	
Original Amortization Term (Months)	300	
Original Interest Only Period (Months)	NAP	
First Payment Date	7/6/2019	
Maturity Date	6/6/2029	
Escrows		
	Upfront	Monthly
Taxes	\$741,075	\$148,215
Insurance	\$0	\$0
Replacement Reserve	\$2,300,000	\$5,433
TI/LC ⁽⁴⁾	\$4,598,167	\$79,238
Other ⁽⁵⁾	\$2,318,452	\$0

Sources and Uses

Sources	\$	%	Uses	\$	%
Loan Combination Amount	\$125,000,000	100.0%	Loan Payoff	\$108,812,981	87.1%
			Upfront Reserves	9,957,694	8.0
			Principal Equity Distribution	5,103,303	4.1
			Closing Costs	1,126,022	0.9
Total Sources	\$125,000,000	100.0%	Total Uses	\$125,000,000	100.0%

The Appraised Value represents the "As Complete and Stabilized" appraised value as of February 1, 2021, which assumes that the Waterfront Plaza Property (as defined below) will have a stabilized occupancy of 95.0%, and absorption of tenant improvements and rent abatement as well as capital expenditures for elevator modernization in years 2019 and 2020. The borrower deposited upfront reserves of approximately \$4,447,079 for existing

- (1) tenant improvements and leasing commissions, approximately \$1,418,088 for free/gap rent and \$2,300,000 for elevator work. The Cut-off Date LTV Ratio and Maturity Date LTV Ratio are calculated using the "As Complete and As Stabilized" appraised value. The As-Is Appraised Value as of January 31, 2019 is equal to \$157,500,000, which equates to a Cut-off Date LTV Ratio and Maturity Date LTV Ratio of 79.1% and 58.1%, respectively. See "—Appraisal" below.
- (2) Calculated based on the aggregate outstanding principal balance of the Waterfront Plaza Loan Combination. The Cut-off Date Balance of \$49,822,682 represents both the non-controlling Note A-2 and the non-controlling Note A-4, which is part of the "Waterfront Plaza Loan Combination" evidenced by four *pari passu* notes having an outstanding principal balance as of the Cut-off Date of \$124,556,704. The related companion loans, which are evidenced by the controlling Note A-1 and non-controlling Note A-3, were contributed to the GSMS 2019-GC40 mortgage trust.
- (3) The monthly TI/LC escrow is equal to (a) on each monthly due date from July 2019 through June 2020, an amount equal to \$79,237.96, (b) on each monthly due date from July 2020 through June 2021, an amount equal to \$113,197.08, (c) on each monthly due date from July 2021 through June 2024, an amount equal to \$67,918.25, (d) on each monthly due date from July 2024 through June 2026, an amount equal to \$56,598.54 and (e) on each monthly due date from July 2026 through June 2029, an amount equal to \$33,959.13, subject to a cap of \$2,445,057. The TI/LC cap is inclusive of \$151,088 of the Upfront TI/LC reserve allocated to general leasing obligations but is exclusive of \$4,447,079 of the Upfront TI/LC escrow allocated to outstanding approved leasing expenses).

- (5) Other escrows includes (i) \$1,418,088 for a free/gap rent reserve, (ii) a security deposit reserve in the amount of \$168,364 for obligations relating to the Oahu Publications, Inc. lease and (iii) a ground rent reserve in the amount of \$732,000.

The following table presents certain information relating to the major tenants (of which certain tenants may have co-tenancy provisions) at the Waterfront Plaza property (the "**Waterfront Plaza Property**"):

Ten Largest Owned Tenants Based on Underwritten Base Rent

Tenant Name	Credit Rating (Fitch/MIS/ S&P) ⁽¹⁾	Tenant GLA	% of GLA	UW Base Rent	% of Total UW Base Rent	UW Base Rent \$ per SF	Lease Expiration	Renewal / Extension Options
Hawaii Pacific University ⁽²⁾	NR / NR / NR	99,058	18.2%	\$1,846,459	13.3%	\$18.64	6/30/2034 ⁽³⁾	2, 5-year options
USCIS	AAA / Aaa / AA+	30,994	5.7	1,421,932	10.2	45.88	6/20/2025	NA
Oahu Publications, Inc.	NR / NR / NR	47,548	8.8	1,183,389	8.5	24.89	3/31/2023	1, 5-year option
McCorrison Miller Mukai MacKinnon LLP	NR / NR / NR	29,231	5.4	931,503	6.7	31.87	12/31/2021	NA
AT&T Corp.	A- / Baa2 / BBB	26,160	4.8	806,727	5.8	30.84	6/30/2020	3, 5-year options
MDX Hawaii, Inc.	NR / NR / NR	21,880	4.0	805,860	5.8	36.83	2/28/2022	2, 3-year options
Hawaii HIDTA	NR / NR / NR	18,589	3.4	711,587	5.1	38.28	9/30/2024	1, 5-year option
Honolulu Surgery Center, L.P.	NR / NR / NR	17,026	3.1	561,858	4.0	33.00	6/30/2025	3, 5-year options
RGN-Honolulu I, LLC	NR / NR / NR	15,935	2.9	278,266	2.0	17.46	10/31/2027	1, 5-year option
Farmers Insurance Hawaii, Inc.	NR / NR / NR	13,239	2.4	225,260	1.6	17.01	12/31/2024	2, 5-year options
Ten Largest Tenants		319,660	58.8%	\$8,772,841	63.0%	\$27.44		
Remaining Owned Tenants		203,599	37.5	5,149,747	37.0	25.29		
Vacant Spaces (Owned Space)		20,087	3.7	0	0.0	0.00		
Totals / Wtd. Avg. Tenants		543,346	100.0%	\$13,922,588	100.0%	\$26.61		

- (1) Certain ratings are those of the parent company or the United States Government whether or not the parent or government guarantees the lease. Hawaii Pacific University ("**HPU**") has taken occupancy of 89,280 SF (90.1%) of its leased space and will take occupancy of the remaining 9,778 SF once the existing tenant moves out. The HPU lease commences in July 2019, and provides for seven months of free rent. At loan origination, approximately \$1,418,088 was reserved under the loan documents for free and gap rent for HPU.
- (2) HPU has three separate leases with 7,852 SF month-to-month, 9,778 SF expiring in August 2020 and 81,428 SF expiring in June 2034.

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LOAN #12: WATERFRONT PLAZA

The following table presents certain information relating to the lease rollover schedule at the Waterfront Plaza Property, based on initial lease expiration dates:

Lease Expiration Schedule⁽¹⁾⁽²⁾

Year Ending December 31	Expiring Owned GLA	% of Owned GLA	Cumulative % of Owned GLA	UW Base Rent	% of Total UW Base Rent	UW Base Rent \$ per SF	# of Expiring Leases
MTM	25,103	4.6%	4.6%	\$688,010	4.9%	\$27.41	21
2019	26,795	4.9%	9.6%	496,511	3.6%	18.53	7
2020	74,062	13.6%	23.2%	2,140,891	15.4%	28.91	16
2021	74,007	13.6%	36.8%	1,886,049	13.5%	25.48	18
2022	34,941	6.4%	43.2%	1,080,959	7.8%	30.94	8
2023	63,099	11.6%	54.8%	1,537,325	11.0%	24.36	7
2024	47,527	8.7%	63.6%	1,272,339	9.1%	26.77	11
2025	58,602	10.8%	74.4%	2,250,590	16.2%	38.40	4
2026	14,409	2.7%	77.0%	373,759	2.7%	25.94	3
2027	15,757	2.9%	79.9%	272,659	2.0%	17.30	1
2028	0	0.0%	79.9%	0	0.0%	0.00	0
2029	7,529	1.4%	81.3%	420,964	3.0%	55.91	1
2030 & Thereafter	81,428	15.0%	96.3%	1,502,532	10.8%	18.45	1
Vacant	20,087	3.7%	100.0%	0	0.0%	0.00	0
Total / Wtd. Avg.	543,346	100.0%		\$13,922,588	100.0%	\$26.61	98

- (1) Certain tenants may have lease termination options that are exercisable prior to the originally stated expiration date of the subject lease and that are not considered in the Lease Expiration Schedule.
- (2) Calculated based on the approximate SF occupied by each tenant.

The following table presents certain information relating to historical leasing at the Waterfront Plaza Property:

Historical Leased %⁽¹⁾

	2016	2017	2018	As of 1/31/2019
Owned Space	89.0%	88.4%	96.3%	96.3%

- (1) As provided by the borrower and which represents occupancy as of December 31 for the indicated year unless otherwise specified.

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LOAN #12: WATERFRONT PLAZA

- Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the Waterfront Plaza Property:

Cash Flow Analysis⁽¹⁾

	2016	2017	2018	Underwritten	Underwritten \$ per SF
Base Rental Revenue	\$12,507,851	\$12,679,300	\$12,185,099	\$13,922,588	\$25.62
Credit Tenant Rent Steps ⁽²⁾	0	0	0	27,401	0.05
Rent Steps ⁽³⁾	0	0	0	383,179	0.71
Value of Vacant Space	0	0	0	762,515	1.40
Total Reimbursements	7,211,025	7,275,826	6,929,846	9,467,358	17.42
Other Income	4,699,065	4,920,147	5,015,251	5,323,774	9.80
Gross Revenue	\$24,417,942	\$24,875,273	\$24,130,197	\$29,886,814	\$55.01
Vacancy/Credit Loss	(398,712)	(203,662)	(335,530)	(1,228,152)	(2.26)
Effective Gross Revenue	\$24,019,229	\$24,671,611	\$23,794,668	\$28,658,662	\$52.74
Total Operating Expenses ⁽⁴⁾	\$13,732,293	\$14,341,452	\$14,617,833	\$15,035,447	\$27.67
Net Operating Income⁽⁵⁾	\$10,286,936	\$10,330,159	\$9,176,834	\$13,623,215	\$25.07
TI/LC	0	0	0	718,408	1.32
Replacement Reserves	0	0	0	135,837	0.25
Net Cash Flow	\$10,286,936	\$10,330,159	\$9,176,834	\$12,768,971	\$23.50

- (1) Certain items such as straight line rent, interest expense, interest income, lease cancellation income, depreciation, amortization, debt service payments and any other non-recurring or non-operating items are not considered for the underwritten cash flow.
- (2) Includes straight line rent steps for CVS, AT&T and Cisco Systems.
- (3) Includes contractual rent steps through October 2020.
- Ground Rent was underwritten based on current annual ground rent of \$2,928,000. The borrower's interest in the Waterfront Plaza Property is pursuant to a ground lease with The Trustees of the Estate of Bernice Pauahi Bishop, which commenced in February 1959 and expires on December 31, 2060. The borrower is required to pay annually, due in equal quarterly installments (a) from the origination date through December 31, 2020, \$2,928,000, (b) from January 1, 2021 through December 31, 2025, \$3,728,000, (c) from January 1, 2026 through December 31, 2030, \$4,428,000, (d) from January 1, 2031 through December 31, 2035, \$5,028,000 and (e) for each five-year period thereafter, the ground rent is required to be determined by mutual agreement, or, if mutual agreement cannot be reached, annual ground rent will be equal to the fair market value of the land (as determined pursuant to an appraisal process) multiplied by an 8% rate of return.
- (4) Increase in Underwritten Net Operating Income is due to recent new leasing, most notably the HPU lease.

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Waterford Lakes Orlando Self Storage	Orlando, FL	2007	74,525	69.6%	6,200,000	15.6	9,900,000	16.7	546,650
Lockwood Sarasota Self Storage	Sarasota, FL	2005	<u>40,539</u>	<u>88.8%</u>	<u>6,000,000</u>	<u>15.1</u>	<u>8,400,000</u>	<u>14.2</u>	<u>562,288</u>
Total / Wtd. Avg.			378,857	77.0%	\$39,750,000	100.0%	\$59,300,000	100.0%	\$3,596,804

- (1) Based on the underwritten rent roll dated March 31, 2019 for the Compass Self Storage Florida Portfolio properties. The appraisal date for Waterford Lakes Orlando Self Storage and Meadow Woods Orlando Self Storage properties is 4/25/2019, and the appraisal date for University Parkway Sarasota Self Storage, Cheval Lutz Self Storage, Cortez Bradenton Self Storage, and Lockwood Sarasota Self Storage properties is 4/26/2019.
- (2)

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LOAN #13: COMPASS SELF STORAGE FLORIDA PORTFOLIO

The following table presents certain information relating to the storage units at the Compass Self Storage Florida Portfolio properties:

Property Name	Storage Unit Mix ⁽¹⁾		Occupied	
	Unit Type	# of Units	Units	% Occupied
University Parkway Sarasota Self Storage ⁽²⁾	Climate Controlled	769	549	71.4%
	Climate Controlled	284	236	83.1%
Cortez Bradenton Self Storage ⁽³⁾	Drive Up	173	149	86.1%
	Non-Climate Controlled	49	45	91.8%
Meadow Woods Orlando Self Storage ⁽⁴⁾	Climate Controlled	308	231	75.0%
	Drive Up	327	258	78.9%
Cheval Lutz Self Storage ⁽⁵⁾	Climate Controlled	383	319	83.3%
	Drive Up	144	110	76.4%
	Non-Climate Controlled	43	36	83.7%
Waterford Lakes Orlando Self Storage ⁽⁶⁾	Climate Controlled	284	186	65.5%
	Drive Up	347	227	65.4%
Lockwood Sarasota Self Storage ⁽⁷⁾	Climate Controlled	266	241	90.6%
	Drive Up	90	78	86.7%
	Non-Climate Controlled	28	26	92.9%

- (1) Based on the underwritten rent roll dated March 31, 2019 for the Compass Self Storage Florida Portfolio properties.
- (2) The University Parkway Sarasota Self Storage property is comprised of 76,315 SF of storage space. The underwritten base rent for the storage space is \$929,280.
- (3) The Cortez Bradenton Self Storage property is comprised of 54,304 SF of storage space and 39 RV parking spaces. The underwritten base rent for the storage space is \$887,064 and \$65,388 for parking.
- (4) The Meadow Woods Orlando Self Storage property is comprised of 76,734 SF of storage space and 15 RV parking spaces. The underwritten base rent for the storage space is \$862,542 and \$22,020 for parking.
- (5) The Cheval Lutz Self Storage property is comprised of 56,440 SF of storage space and 6 RV parking spaces. The underwritten base rent for the storage space is \$877,362 and \$8,448 for parking.
- (6) The Waterford Lakes Orlando Self Storage property is comprised of 74,525 SF of storage space and 9 parking spaces. The underwritten base rent for the storage space is \$797,850 and \$10,800 for parking.
- (7) The Lockwood Sarasota Self Storage property is comprised of 40,539 SF of storage space and 52 parking spaces. The underwritten base rent for the storage space is \$704,676 and \$89,508 for parking.

The following table presents certain information relating to historical occupancy at the Compass Self Storage Florida Portfolio properties:

	Historical Occupancy % ⁽¹⁾		
	2017	2018	Most Recent ⁽²⁾
Owned Space	85.5%	81.3%	77.0%

As provided

- (1) As provided by the borrower, which represents occupancy as of December 31 for the indicated year, unless otherwise specified..
- (2) Occupancy is based on the underwritten rent roll dated March 31, 2019 for the Compass Self Storage Florida Portfolio properties.

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LOAN #13: COMPASS SELF STORAGE FLORIDA PORTFOLIO

The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the Compass Self Storage Florida Portfolio properties:

Cash Flow Analysis⁽¹⁾⁽²⁾

	2016	2017	2018	TTM 4/30/2019	Underwritten	Underwritten \$ per SF
Storage Income						
Base Rent	\$6,144,112	\$6,181,204	\$5,985,043	\$5,953,302	\$5,254,938	\$13.87
Potential Income from Vacant Units	0	0	0	0	1,381,200	3.65
Gross Potential Rent	\$6,144,112	\$6,181,204	\$5,985,043	\$5,953,302	\$6,636,138	\$17.52
Vacancy & Credit Loss & Concessions ⁽³⁾	(1,032,144)	(981,447)	(836,015)	(833,000)	(1,515,835)	(4.00)
Storage EGI before Other Income	\$5,111,969	\$5,199,757	\$5,149,028	\$5,120,303	\$5,120,303	13.52
Other Income ⁽⁴⁾	451,873	490,840	441,385	432,113	432,113	1.14
Effective Gross Income	\$5,563,842	\$5,690,597	\$5,590,413	\$5,552,415	\$5,552,415	\$14.66
Operating Expenses						
Real Estate Taxes	\$399,404	\$424,079	\$456,184	\$456,355	\$456,355	\$1.20
Insurance	99,538	79,388	111,352	93,131	77,118	0.20
Management Fee	222,606	227,701	223,710	222,071	222,097	0.59
Other Operating Expenses	1,108,795	1,156,570	1,158,361	1,160,652	1,160,652	3.06
Total Operating Expenses	\$1,830,344	\$1,887,738	\$1,949,607	\$1,932,209	\$1,916,222	\$5.06
Net Operating Income	\$3,733,498	\$3,802,859	\$3,640,806	\$3,620,206	\$3,636,193	\$9.60
Replacement Reserves	0	0	0	0	39,388	0.10
Net Cash Flow	\$3,733,498	\$3,802,859	\$3,640,806	\$3,620,206	\$3,596,804	\$9.49
Occupancy	NAP	85.5%	81.3%	77.0%⁽¹⁾	77.2%⁽³⁾	
NOI Debt Yield	9.4%	9.6%	9.2%	9.1%	9.1%	
NCF DSCR	2.11x	2.14x	2.05x	2.04x	2.03x	

(1) Based on the underwritten rent roll dated March 31, 2019 for the Compass Self Storage Florida Portfolio properties.

Certain items such as straight line rent, interest expense, interest income, lease cancellation income, depreciation, amortization, debt service

(2) payments and any other non-recurring or non-operating items were excluded from the historical presentation and are not considered for the underwritten cash flow.

(3) Vacancy & Credit Loss & Concessions is underwritten to the current, economic vacancy of 22.8%.

(4) Other Income includes truck rental income, tenant insurance commission, ancillary item sales, admin fees and miscellaneous income.

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LOAN #14: 2 MACARTHUR

Mortgaged Property Information	
Number of Mortgaged Properties	1
Location (City/State)	Santa Ana / California
Property Type	Office
Size (SF)	208,041
Total Occupancy as of 2/6/2019	100.0%
Owned Occupancy as of 2/6/2019	100.0%
Year Built / Latest Renovation	2001 / NAP
Appraised Value ⁽¹⁾	\$85,000,000
Appraisal Date ⁽¹⁾	5/7/2020
Borrower Sponsors	Tiger Alternative Investors
Property Management	OW Management Services, Inc.
Underwritten Revenues	\$7,885,003
Underwritten Expenses	\$2,923,951
Underwritten Net Operating Income (NOI)	\$4,961,052
Underwritten Net Cash Flow (NCF)	\$4,917,363
Cut-off Date LTV Ratio ⁽¹⁾⁽²⁾	40.0%
Maturity Date LTV Ratio ⁽¹⁾⁽²⁾	40.0%
DSCR Based on Underwritten NOI / NCF ⁽²⁾	5.84x / 5.79x
Debt Yield Based on Underwritten NOI / NCF ⁽²⁾	14.6% / 14.5%

Mortgage Loan Information	
Loan Seller	
Cut-off Date Balance ⁽³⁾	\$34,000,000
Cut-off Date Balance per SF ⁽²⁾	\$163.45
Percentage of Initial Pool Balance	
Number of Related Mortgage Loans	
Type of Security	Fee
Mortgage Rate	2.46%
Original Term to Maturity (Months)	
Original Amortization Term (Months)	
Original Interest Only Period (Months)	
First Payment Date	
Maturity Date	
	Escrows
	Upfront
Taxes	\$0
Insurance	\$0
Replacement Reserve	\$0
TI/LC	\$528,032
Other ⁽⁴⁾	\$2,497,221

Sources and Uses

Sources	\$	%	Uses	\$
Mortgage Loan	\$34,000,000	40.1%	Purchase Price	\$79,974,747 ⁽⁵⁾
Subordinate Debt	20,000,000	23.6	Upfront Reserves	3,025,253
Principal's New Cash Contribution	30,737,582	36.3	Origination Costs	1,737,582
Total Sources	\$84,737,582	100.0%	Total Uses	\$84,737,582

The Appraised Value represents the "As Stabilized" appraised value as of May 7, 2020, which assumes the contractual tenant improvement and leasing commission obligations have been fulfilled and there is no outstanding free rent. At loan origination, the borrower reserved \$528,032 into a TI/LC reserve and \$2,497,221 into a free rent reserve. The Cut-off Date LTV Ratio and Maturity Date LTV Ratio are calculated using the "As Stabilized" appraised value. The Cut-off Date LTV Ratio and the Maturity Date LTV Ratio based on the "As Is" Appraised Value as of May 7, 2019 of \$82,500,000 are 41.2%, and 41.2%, respectively.

(1) LC reserve and \$2,497,221 into a free rent reserve. The Cut-off Date LTV Ratio and Maturity Date LTV Ratio are calculated using the "As Stabilized" appraised value. The Cut-off Date LTV Ratio and the Maturity Date LTV Ratio based on the "As Is" Appraised Value as of May 7, 2019 of \$82,500,000 are 41.2%, and 41.2%, respectively.

(2) Calculated based on the outstanding principal balance of the 2 MacArthur Loan. Based on the 2 MacArthur Loan Combination (as defined below), the DSCR Based on the Underwritten NOI / NCF is 2.54x and 2.52x, respectively.

The Cut-off Date Balance of \$34,000,000 represents the non-controlling Note A (the "2 MacArthur Loan"), which is part of a loan combination (the "2 MacArthur Loan Combination") that includes one subordinate note having an outstanding principal balance as of the Cut-off Date of \$20,000,000.

(3) The subordinate note (Note B) has an interest rate of 5.45000% *per annum*. The subordinate note was sold to a third party. The 2 MacArthur Loan received a credit assessment of BBB-sf by Fitch and A- by Morningstar. S&P confirmed that the 2 MacArthur Loan exhibits credit characteristics that are consistent with investment grade credit.

(4) Other escrows includes \$2,497,221 for rent replacement reserves.

(5) The Purchase Price represents the gross purchase price of \$83,000,000 net of seller credits equal to the upfront reserves of \$3,025,253.

The following table presents certain information relating to the major tenants (of which certain tenants may have co-tenancy provisions) at the 2 MacArthur mortgaged property (the "2 MacArthur Property"):

Largest Owned Tenants Based on Underwritten Base Rent⁽¹⁾

Tenant Name	Credit Rating (Fitch/MIS/ S&P) ⁽²⁾	Tenant GLA	% of GLA	UW Base Rent	% of Total UW Base Rent	UW Base Rent \$ per SF	Lease Expiration	Renewal / Extension Options
State of California ⁽³⁾⁽⁴⁾	AA- / Aa3 / AA-	169,070	81.3%	\$6,159,943	83.5%	\$36.43	5/31/2039	NAP
Radiology Partners	NR / NR / NR	33,889	16.3%	1,213,904	16.5%	35.82	1/31/2025	1, 5-year option
Largest Tenants		202,959	97.6%	\$7,373,847	100.0%	\$36.33		
Amenity Space ⁽⁵⁾		5,082	2.4%	0	0.0%	\$0.00		
Vacant Spaces (Owned Space)		0	0.0%	0	0.0%	\$0.00		
Totals / Wtd. Avg. Tenants⁽⁶⁾		208,041	100.0%	\$7,373,847	100.0%	\$36.33		

(1) Based on the underwritten rent roll dated February 6, 2019.

(2) Certain ratings are those of the parent company or the State of California Government whether or not the parent or government guarantees the lease.

(3) The State of California has the right to terminate its lease at any time on or after May 31, 2034 with at least 90 days' written notice.

(4) The State of California has the option to purchase the 2 MacArthur Property, beginning 10 years following the lease commencement date of June 1, 2019, for a purchase price of \$124,885,200.

(5) Amenity space includes 2,007 SF of conference space and 3,075 SF of fitness center space, both spaces with no attributable rent.

(6) Wtd. Avg. UW Base Rent \$ per SF excludes the Amenity Space.

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LOAN #14: 2 MACARTHUR

The following table presents certain information relating to the lease rollover schedule at the 2 MacArthur Property, based on initial lease expiration dates:

Lease Expiration Schedule⁽¹⁾⁽²⁾

Year Ending December 31	Expiring Owned GLA	% of Owned GLA	Cumulative % of Owned GLA	UW Base Rent ⁽³⁾	% of Total UW Base Rent ⁽³⁾	UW Base Rent \$ per SF ⁽³⁾⁽⁴⁾	# of Expiring Leases ⁽³⁾
MTM	0	0.0%	0.0%	\$0	0.0%	\$0.00	0
2019	0	0.0	0.0%	\$0	0.0	\$0.00	0
2020	0	0.0	0.0%	\$0	0.0	\$0.00	0
2021	0	0.0	0.0%	\$0	0.0	\$0.00	0
2022	0	0.0	0.0%	\$0	0.0	\$0.00	0
2023	0	0.0	0.0%	\$0	0.0	\$0.00	0
2024	0	0.0	0.0%	\$0	0.0	\$0.00	0
2025	33,889	16.3	16.3%	1,213,904	16.5	\$35.82	1
2026	0	0.0	16.3%	0	0.0	\$0.00	0
2027	0	0.0	16.3%	0	0.0	\$0.00	0
2028	0	0.0	16.3%	0	0.0	\$0.00	0
2029	0	0.0	16.3%	0	0.0	\$0.00	0
2030 & Thereafter	174,152	83.7	100.0%	6,159,943	83.5	\$35.37	1
Vacant	0	0.0	100.0%	0	0.0	\$0.00	0
Total / Wtd. Avg.⁽³⁾⁽⁴⁾	208,041	100.0%		\$7,373,847	100.0%	\$36.33	2

- (1) Certain tenants may have lease termination options that are exercisable prior to the originally stated expiration date of the subject lease and that are not considered in the Lease Expiration Schedule.
- (2) Calculated based on the approximate SF occupied by each tenant.
- (3) The Total / Wtd. Avg. UW Base Rent \$ per SF excludes 5,082 of amenity space with no attributable rent.
- (4) Wtd. Avg. UW Base Rent excludes the amenity space.

The following table presents certain information relating to historical leasing at the 2 MacArthur property:

Historical Leased %⁽¹⁾

2016	2017	2018	As of 2/6/2019
54.6%	73.0%	86.9%	100.0%

- (1) As provided by the borrower and which represents occupancy as of December 31 for the indicated year unless otherwise specified.

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LOAN #14: 2 MACARTHUR

- **Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the 2 MacArthur Property:

Cash Flow Analysis⁽¹⁾

	<u>Underwritten</u>	<u>Underwritten</u> <u>\$ per SF</u>
Base Rental Revenue	\$7,373,847	\$35.44
Credit Tenant Rent Steps ⁽²⁾	385,994	1.86
Rent Steps ⁽³⁾	39,311	0.19
Value of Vacant Space	0	0.00
Total Reimbursements	123,614	0.59
Other Income	268,140	1.29
Gross Revenue	<u>\$8,190,907</u>	<u>\$39.37</u>
Vacancy/Credit Loss	<u>(305,903)</u>	<u>(1.47)</u>
Effective Gross Revenue	\$7,885,003	\$37.90
Real Estate Taxes	\$937,676	\$4.51
Insurance	42,431	0.20
Management Fee	236,550	1.14
Other Operating Expenses	1,707,294	8.21
Total Operating Expenses	<u>\$2,923,951</u>	<u>\$14.05</u>
Net Operating Income	\$4,961,052	\$23.85
TI/LC	0	\$0.00
Replacement Reserves	43,689	\$0.21
Net Cash Flow	\$4,917,363	\$23.64

- (1) Certain items such as straight line rent, interest expense, interest income, lease cancellation income, depreciation, amortization, debt service payments and any other non-recurring or non-operating items are not considered for the underwritten cash flow.
- (2) Includes straight line rent steps for the State of California.
- (3) Includes contractual rent steps through June 2020.

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LOAN #15: THE CENTRE

Mortgaged Property Information	
Number of Mortgaged Properties	1
Location (City/State)	Cliffside Park, New Jersey
Property Type	Multifamily
Size (Units)	314
Total Occupancy as of 6/24/2019 ⁽¹⁾	89.5%
Owned Occupancy as of 6/24/2019 ⁽¹⁾	89.5%
Year Built / Latest Renovation	2017 / NAP
Appraised Value	\$188,200,000
Appraisal Date	4/12/2019
Borrower Sponsor	Leibel Lederman
Property Management	Cliffside TC Property Management LLC
Underwritten Revenues	\$10,488,618
Underwritten Expenses	\$2,588,348
Underwritten Net Operating Income (NOI)	\$7,900,270
Underwritten Net Cash Flow (NCF)	\$7,821,770
Cut-off Date LTV Ratio ⁽²⁾	31.9%
Maturity Date LTV Ratio ⁽²⁾	31.9%
DSCR Based on Underwritten NOI / NCF ⁽²⁾	2.29x / 2.26x
Debt Yield Based on Underwritten NOI / NCF ⁽²⁾	13.2% / 13.0%

Mortgage Loan Information	
Loan Seller	CRF
Cut-off Date Balance ⁽³⁾	\$30,000,000
Cut-off Date Balance per Unit ⁽²⁾	\$191,082
Percentage of Initial Pool Balance	2.0%
Number of Related Mortgage Loans	No
Type of Security	Fee Simple
Mortgage Rate	5.681666666666666
Original Term to Maturity (Months)	
Original Amortization Term (Months)	No
Original Interest Only Period (Months)	
First Payment Date	8/6/2019
Maturity Date	7/6/2024
Escrows⁽⁴⁾	
	Upfront
Taxes	\$281,065
Insurance	\$0
Replacement Reserve	\$0
TI/LC	\$0
Other ⁽⁵⁾	\$386,048

Sources and Uses

Sources	\$	%	Uses	\$	%
Loan Combination Amount	\$130,000,000	88.6%	Loan Payoff	\$116,609,170	79.5%
New Sponsor Equity ⁽⁵⁾	16,669,063	11.4	Bond Payoff / Defeasance	14,762,337	10.1
Other Sources	100,000	0.1	Seller Proceeds	12,818,641	8.7
			Closing Costs	1,911,802	1.3
			Upfront Reserves	667,113	0.5
Total Sources	\$146,769,063	100.0%	Total Uses	\$146,769,063	100.0%

(1) Total Occupancy and Owned Occupancy are based on occupied units as of the underwritten rent roll dated June 24, 2019.

(2) Calculated based on the aggregate outstanding principal balance as of the Cut-off Date of The Centre A Notes.

The Cut-off Date Balance of \$30,000,000 represents the non-controlling note A-1, which is part of a larger loan evidenced by two *pari passu* senior A notes having an aggregate outstanding principal balance as of the Cut-off Date of \$60,000,000 and one controlling subordinate B note, with an original principal balance of \$70,000,000. The Centre Loan received a credit assessment of BBB-sf by Fitch and AA+ by Morningstar. S&P confirmed that The Centre Loan exhibits credit characteristics that are consistent with investment grade credit.

(4) Upfront Other reserves consist of (i) \$363,548 for an unfunded obligation reserve, and (ii) \$22,500 for a condo assessments reserve.

As part of this transaction, the borrower sponsor, Leibel Lederman, acquired a 60% majority stake in the ownership structure via an approximately \$16.7MM fresh cash equity investment for the recapitalization of the Property. The original developer and seller of the 60% interest in the Property (who maintains a 40% equity interest in the ownership structure) received approximately \$12.81MM of sale proceeds as part of the recapitalization."

The following table presents certain information relating to the loan combination summary at The Centre Property:

Note	Loan Combination Summary		Note Holder	Controlling Note
	Original Balance	Cut-off Date Balance		
A-1	\$30,000,000	\$30,000,000	BMARK 2019-B12	No ⁽¹⁾
A-2	\$30,000,000	\$30,000,000	CREFI ⁽²⁾	No

B	\$70,000,000	\$70,000,000	BMARK 2019-B12	Yes ⁽¹⁾
Total	\$130,000,000	\$130,000,000		

- The initial Controlling Note is The Centre B Note, so long as no related control appraisal period has occurred and is continuing. If and for so long as a control appraisal period has occurred and is continuing, then the Controlling Note will be note A-1. See “*Description of the Mortgage Pool— The Loan Combinations— The Centre Pari Passu-AB Loan Combination*” in the Preliminary Prospectus. The Centre Loan Combination will be serviced under the BMARK 2019-B12 PSA.
- (1) Expected to be contributed to one or more future securitization transactions.

The following table presents certain information relating to the loan combination metrics at The Centre Property:

Loan Combination Metrics

	% of Total Debt	Cut-off Date LTV	UW NOI Debt Yield	UW NCF DSCR
A Notes \$60,000,000	46.2%	31.9%	13.2%	2.26x
B Note \$70,000,000	53.8%	69.1%	6.1%	1.32x

The depositor has filed a registration statement (including a prospectus) with the Securities and Exchange Commission (“SEC”) (SEC File No. 333-228597) for the offering to which this communication relates. Before you invest, you should read the prospectus in the registration statement and other documents the depositor has filed with the SEC for more complete information about the depositor, the issuing entity and this offering. You may get these documents for free by visiting EDGAR on the SEC website at www.sec.gov. Alternatively, the depositor or Citigroup Global Markets Inc., Deutsche Bank Securities Inc., J.P. Morgan Securities LLC, Academy Securities, Inc., Drexel Hamilton, LLC or any other underwriter or dealer participating in this offering will arrange to send you the prospectus if you request it by calling toll-free 1-800-831-9146.

LOAN #15: THE CENTRE

The following table presents certain information relating to the units and rent at The Centre Property:

Unit Type	# of Units	% of Units	Multifamily Unit Mix ⁽¹⁾		Average Unit Size (SF)	Average Market Rent per Month ⁽²⁾	In-Place Average Rent per Month
			Occupied Units ⁽¹⁾	% Occupied			
Studio	39	12.4%	38	97.4%	564	\$2,103	\$2,117
1 BR	120	38.2	119	99.2	820	2,432	2,435
2 BR	155	49.4	124	80.0	1,284	3,534	3,520
Total / Wtd. Avg.	314	100.0%	281	89.5%	1,017	\$2,935	\$2,931

(1) Based on the underwritten rent roll dated June 24, 2019.

(2) Source: Appraisal.

The following table presents certain information relating to historical leasing at The Centre Property:

Historical Leased %⁽¹⁾

	As of 6/24/2019
Owned Space	89.5%

(1) The Centre Property was recently constructed in 2017 and was in lease up from October 2017 through June 2019, therefore no historical information is available.

- Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at The Centre Property:

Cash Flow Analysis⁽¹⁾

	Underwritten	Underwritten \$ per Unit
Apartment Income		
Base Rent ⁽²⁾	\$9,680,718	\$30,830.31
Potential Income from Vacant Units ⁽³⁾	1,369,068	4,360.09
Gross Potential Rent	\$11,049,786	\$35,190.40
Vacancy & Credit Loss & Concessions ⁽⁴⁾	(1,369,068)	(4,360.09)
Total Rent	\$9,680,718	30,830.31
Other Income ⁽⁴⁾	807,900	2,572.93
Effective Gross Income	\$10,488,618	\$33,403.24
Real Estate Taxes	\$1,048,862	\$3,340.32
Insurance	171,955	547.63
Management Fee	314,659	1,002.10
Other Operating Expenses	1,052,873	3,353.10
Total Operating Expenses	\$2,588,348	\$8,243.15
Net Operating Income	\$7,900,270	\$25,160.09
Replacement Reserves – Apartments	78,500	250.00
TI/LC	0	0

Net Cash Flow	\$7,821,770	\$24,910.09
Occupancy⁽⁵⁾	88.2%	
NOI Debt Yield⁽⁶⁾	13.2%	
NCF DSCR⁽⁶⁾	2.26x	

-
- (1) The Centre Property was recently constructed in 2017 and was in lease up from October 2017 through June 2019, therefore no historical information is available.
 - (2) Underwritten Base Rent is based on occupied units as of the underwritten rent roll dated June 24, 2019.
 - (3) Potential Income from Vacant Units represents one studio, one one-bedroom unit and 31 two-bedroom units at the appraiser's estimated market rents.
 - (4) Other Income consists of parking income, amenity fees, pet fees, and miscellaneous income.
 - (5) Vacancy & Credit Loss & Concessions is underwritten to the current 11.8% economic vacancy.
 - (6) Calculated based on the aggregate outstanding principal balance of The Centre A Notes.

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LOAN #15: THE CENTRE

The following table presents certain information relating to the primary competition for The Centre Property:

Directly Competitive Buildings⁽¹⁾

	<u>The Centre⁽²⁾</u>	<u>The Modern</u>	<u>Hudson Lights</u>	<u>Avalon North Bergen</u>	<u>The Oyster</u>
Location	Cliffside Park, NJ	Fort Lee, NJ	Fort Lee, NJ	North Bergen, NJ	Edgewater, NJ
Number of Stories	15	47	12	6	6
Year Built	2017	2014	2017	2012	2016
Number of units	314	451	276	164	100
Occupancy	89.5%	90.0%	85.0%	98.0%	94.0%
Unit size (SF):					
- Studio	564	540	627	643	560
- 1-BR	820	850	813	902	744
- 2-BR	1,284	1,236	1,326	1,184	1,205
Rent per month:					
- Studio	\$2,103	\$2,224	\$2,295	\$1,892	\$2,300
- 1-BR	\$2,432	\$3,061	\$2,791	\$2,004	\$2,880
- 2-BR	\$3,534	\$4,538	\$3,893	\$2,474	\$3,900

(1) Source: Appraisal.

(2) The rent per month for the subject property is based off of the underwritten rent roll dated June 24, 2019.

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