UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

WELLS REAL ESTATE INVESTMENT TRUST, INC.

(Exact Name of Registrant as Specified in Its Charter)

Maryland

(State or Other Jurisdiction of Incorporation or Organization)

58-2328421

(I.R.S. Employer Identification No.)

6200 The Corners Parkway, Suite 500 Norcross, Georgia 30092 (Address of Principal Executive Offices) (Zip Code)

Wells Real Estate Investment Trust, Inc. 2007 Omnibus Incentive Plan (Full Title of Plan)

Donald A. Miller, CFA
Chief Executive Officer and President
6200 The Corners Parkway, Suite 500
Norcross, Georgia 30092
(Name and Address of Agent For Service)

(770) 325-3700 Telephone Number, Including Area Code, of Agent For Service.

With copies to:

Donald Kennicott Howard S. Hirsch Holland & Knight LLP 1201 West Peachtree Street, N.E. Atlanta, Georgia 30309

CALCULATION OF REGISTRATION FEE

| Title of Securities to be Registered | Amount to be Registered ⁽¹⁾ | Proposed Maximum Offering Price Per Share (2) | Proposed Maximum Aggregate Offering Price (2) | ount of ration Fee |
|---|--|--|---|-----------------------|
| Common Stock, par value \$0.01 per share ⁽³⁾ | 14,000,000 | \$ 8.93 | \$125,020,000 | \$ 3,839 |

- (1) This Registration Statement shall also cover any additional shares of Common Stock which become issuable under the 2007 Omnibus Incentive Plan by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the Registrant's receipt of consideration which results in an increase in the number of outstanding shares of the Registrant's Common Stock.
- (2) Estimated solely for the purpose of calculating the registration fee, pursuant to Rule 457(h) under the Securities Act of 1933, based on a price of \$8.93 per share.
- (3) Includes a number of interests related to the Common Stock to be issued under the 2007 Omnibus Incentive Plan (all of which are generally nontransferable, including stock options, stock appreciation rights, restricted stock awards, deferred stock awards, dividend equivalent rights, and other stock-based awards).

INTRODUCTION

This Registration Statement on Form S-8 relates to 14,000,000 shares of common stock of Wells Real Estate Investment Trust, Inc. (the "Company"), par value \$0.01 per share, issuable to eligible directors, officers and key employees of the Company and its subsidiaries under the Wells Real Estate Investment Trust, Inc. 2007 Omnibus Incentive Plan (the "Plan"). The Registration Statement covers the maximum number of shares of the Company's common stock that can be issued under the Plan and includes a number of interests related to the Common Stock to be issued under the 2007 Omnibus Incentive Plan (all of which are generally nontransferable, including stock options, stock appreciation rights, restricted stock awards, deferred stock awards, dividend equivalent rights, and other stock-based awards).

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Item 1. Plan Information.*

Item 2. Registrant Information and Employee Plan Annual Information.*

* Information required by Part I is omitted from this filing in accordance with the provisions of Rule 428 promulgated by the U.S. Securities and Exchange Commission (the "SEC") under the Securities Act of 1933, as amended (the "Securities Act"), and the Note to Part I of Form S-8.

The document(s) containing the information specified by Part I of Form S-8 will be sent or given to participants under the Plan as specified by Rule 428(b)(1) under the Securities Act. Such document(s) will not be filed with the SEC in this Registration Statement, but will constitute (along with the documents incorporated by reference into this Registration Statement pursuant to Item 3 of Part II hereof) a prospectus which will meet the requirements of Section 10(a) of the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents By Reference.

The following documents filed by the Company with the SEC under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), are incorporated by reference:

- (a) the Company's Annual Report on Form 10-K filed on March 27, 2007;
- (b) the Company's Current Reports on Forms 8-K filed on January 9, 2007, January 30, 2007, February 5, 2007, February 14, 2007, February 26, 2007, March 5, 2007, March 20, 2007, April 11, 2007, April 20, 2007, and April 23, 2007; and
- (c) (i) the description of the Company's common stock, par value \$0.01 per share, under the caption "Description of Registrant's Securities To Be Registered" in the Company's Registration Statement on Form 8-A, filed with the SEC on April 8, 1999, as amended and restated by the Company's Registration Statement Amendment No. 1 to Form 8-A filed with the SEC on October 13, 2000, and any amendment or report filed for the purpose of updating such description; (ii) the description of the Company's common stock, par value \$0.01 per share, under

the caption "Description of Shares" in the Company's Registration Statement on Form S-11 (Commission No. 333-85848), filed with the SEC on April 8, 2002, as amended, as such descriptions may be amended or revised as described in the Current Reports on Form 8-K set forth in Item 3(b) above; and (iii) the revised description of the Company's dividend reinvestment plan and share redemption program contained in the Company's Registration Statement on Form S-3 (Commission No. 333-114212), filed with the SEC on April 5, 2004, as amended, as such descriptions may be amended or revised as described in the Current Reports on Form 8-K set forth in Item 3(b) above and any further amendment or report filed for the purpose of updating such descriptions.

In addition, all documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement which indicates that all of the shares of the Company's common stock offered hereby have been sold or which deregisters all shares then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of filing of such documents. Any statement contained in this Registration Statement, or in a document incorporated or deemed incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is, or is deemed to be, incorporated by reference herein modifies or supersedes such earlier statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Pursuant to the Maryland General Corporation Law (the "MGCL") and the Company's charter, the Company is required to indemnify and hold harmless a present or former director or officer and may indemnify and hold harmless a present or former employee or agent of the Company (collectively, the "Indemnitees"), against any or all losses or liabilities reasonably incurred by the Indemnitee in connection with or by reason of any act or omission performed or omitted to be performed on behalf of the Company in such capacity, provided, that such Indemnitee has determined, in good faith, that the course of conduct which caused the loss or liability was in the best interests of the Company. The Company will not indemnify or hold harmless the Indemnitee if:

(a) in the case of an Indemnitee that is a director (other than an independent director) or an officer, the loss or liability was the result of negligence or misconduct by the Indemnitee, (c) the act or omission was material to the loss or liability and was committed in bad faith or was the result of active or deliberate dishonesty; (d) the Indemnitee actually received an improper personal benefit in money, property, or services; (e) in the case of any criminal proceeding, the Indemnitee had reasonable cause to believe that the act or omission was unlawful; or (f) in a proceeding by or in the right of the Company, the Indemnitee shall have been adjudged to be liable to the Company. In addition, the Company will not provide indemnification for any loss, liability or expense arising from or out of an alleged violation of federal or state securities law unless one or more of the following conditions are met: (i) there has been a successful adjudication on the merits of each count involving alleged securities law violation as to the

Indemnitee; (ii) such claims have been dismissed with prejudice on the merits by a court of competent jurisdiction as to the Indemnitee; or (iii) a court of competent jurisdiction approves a settlement of the claims against the Indemnitee and finds that indemnification of the settlement and the related costs should be made, and the court considering the request of indemnification has been advised of the SEC's position and of the published position of any state securities regulatory authority in which securities of the Company were offered or sold as to indemnification for violation of securities laws. Pursuant to the Company's charter, the Company is required to pay or reimburse reasonable expenses and other costs incurred by a present or former director or an officer and may pay or reimburse reasonable expenses incurred by any other Indemnitee in advance of final disposition of a proceeding if all of the following are satisfied: (i) the proceeding relates to acts or omissions with respect to the performance of duties or services on behalf of the Company; (ii) the Indemnitee provides the Company with written affirmation of his good faith belief that he has met the standard of conduct necessary for indemnification by the Company as authorized by the Company's charter; (iii) the legal proceeding was initiated by a third party who is not a stockholder, or, if by a stockholder of the Company acting in his or her capacity as such, a court of competent jurisdiction approves such advancement; and (iv) the Indemnitee provides the Company with a written agreement to repay the amount paid or reimbursed by the Company, together with the applicable legal rate of interest thereon, if it is ultimately determined that the Indemnitee did not comply with the requisite standard of conduct and is not entitled to indemnification. The Company's charter further provides that any indemnification payment or reimbursement of expenses will be furnished in accordance with the procedures in Section 2-418(e) of the MGCL.

Any indemnification may be paid only out of the Company's net assets (as defined in the Company's charter), and no portion may be recoverable from the Company's stockholders.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling the Company pursuant to the foregoing provisions, the Company has been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

The following is a list of exhibits to this registration statement:

| Exhibit No. | Description |
|-------------------|--|
| +5.1 | Opinion of Holland & Knight LLP as to the legality of the securities being registered |
| +23.1 | Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm, dated April 24, 2007. |
| +23.2 | Consent of Holland & Knight LLP (included in Exhibit 5.1) |
| + Filed herewith. | |

Item 9. Undertakings.

(a) The Company hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
- (ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;
- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

Provided however.

- (A) That paragraphs (a)(1)(i) and (a)(1)(ii) of this section do not apply if the Registration Statement is on Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the Company pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the Registration Statement; and
- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The Company hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Company's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions, or otherwise, the Company has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Company of expenses incurred or paid by a director, officer or controlling person of the Company in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Company will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Company certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Atlanta, State of Georgia, on April 30, 2007.

WELLS REAL ESTATE INVESTMENT TRUST, INC.

By: /s/Donald A. Miller, CFA
Donald A. Miller, CFA
President, Principal Executive Officer, and Director

POWER OF ATTORNEY

Each person whose signature appears below hereby severally constitutes and appoints Robert E. Bowers, as his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution for him and in his name, place and stead, in any and all capacities to sign any and all amendments to this registration statement on Form S-8, including any post-effective amendments hereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that each said attorney-in-fact and agents or any of them or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

| Signature | Title | Date |
|---|---|----------------|
| /S/ MICHAEL R. BUCHANAN Michael R. Buchanan | Independent Director | April 30, 2007 |
| /S/ WILLIAM H. KEOGLER, JR. William H. Keogler, Jr. | Independent Director | April 30, 2007 |
| /S/ DONALD S. MOSS Donald S. Moss | Independent Director | April 30, 2007 |
| /S/ W. WAYNE WOODY W. Wayne Woody | Independent Director | April 30, 2007 |
| /S/ DONALD A. MILLER, CFA Donald A. Miller, CFA | Chief Executive Officer, President and Director (Principal Executive Officer) | April 30, 2007 |
| /S/ LEO F. WELLS, III Leo F. Wells, III | Chairman and Director | April 30, 2007 |
| /S/ ROBERT E. BOWERS Robert E. Bowers | Executive Vice President, Secretary and Treasurer (Principal Financial Officer) | April 30, 2007 |

EXHIBIT INDEX

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|------------------|--|
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| +23.2 | Consent of Holland & Knight LLP (included in Exhibit 5.1) |
| + Filed herewith | |

+ Filed herewith.

April 30, 2007

Wells Real Estate Investment Trust, Inc. 6200 The Comers Parkway Norcross, Georgia 30092-3365

Re: Registration Statement on Form S-8 Relating to Shares of Common Stock Issuable pursuant to 2007 Omnibus Incentive Plan of Wells Real Estate Investment Trust, Inc.

Ladies and Gentlemen:

This opinion is being furnished in connection with the Registration Statement on Form S-8 (the "Registration Statement") of Wells Real Estate Investment Trust, Inc. (the "Company"), under the Securities Act of 1933, as amended, for the registration of an aggregate of 14,000,000 shares of the Company's common stock, par value \$.01 per share, issuable pursuant to the 2007 Omnibus Incentive Plan of Wells Real Estate Investment Trust, Inc. ("Incentive Plan"). The common stock issuable pursuant to the Incentive Plan is referred to herein as the "Shares."

We have examined and are familiar with the following: (a) Second Amended and Restated Articles of Incorporation of the Company, as filed in the Maryland Department of Assessments and Taxation on April 17, 2007; (b) Bylaws of the Company, as amended; (c) proceedings of the Board of Directors and stockholders of the Company in connection with the adoption of the Incentive Plan; (d) Certificate of Status for the Company from the State of Maryland dated April 27, 2007; and (e) such other documents, Company records and matters of law as we have deemed to be pertinent.

With respect to all of the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, and the conformity to the originals of all documents submitted to us as certified or reproduced copies.

Assuming the foregoing, based on our review of the relevant documents and materials, and without further investigation, it is our opinion that:

- 1. The Company has been duly organized and is validly existing and in good standing under the laws of the State of Maryland.
- 2. The Shares have been duly authorized and, when paid for and issued in accordance with the terms of the Incentive Plan, will be duly and validly issued, fully paid and non-assessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 in the Registration Statement. In giving this consent, however, we do not thereby admit that we are an "expert" within the meaning of the Securities Act of 1933, as amended, or that we come within the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules or regulations of the Securities and Exchange Commission promulgated thereunder

We undertake no obligation to update the opinions as expressed herein at any time after the date hereof. This opinion letter is solely for the information and use of the addressee, and it may not be distributed, relied upon for any purpose by any person, quoted in whole or in part, or otherwise reproduced in any document, or filed with any governmental agency without our express written consent.

Sincerely yours, HOLLAND & KNIGHT LLP /s/ Holland & Knight LLP

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Wells Real Estate Investment Trust, Inc. 2007 Omnibus Incentive Plan, of our report dated March 9, 2007 (except for Note 15, as to which the date is March 12, 2007), with respect to the consolidated financial statements and schedule of Wells Real Estate Investment Trust, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2006, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Atlanta, GA April 24, 2007