PROSPECTUS SUPPLEMENT NO. 3 (To Prospectus dated March 25, 2014)

228,291 Shares



Common Stock

This Prospectus Supplement No. 3 (the "<u>Prospectus Supplement</u>") supplements the prospectus dated March 25, 2014 (the "<u>Prospectus</u>"), relating to the possible resale of up to 228,291 shares of common stock, \$0.01 par value per share (the "<u>Common Stock</u>") of Wheeler Real Estate Investment Trust, Inc. (the "<u>Company</u>"), that may be offered and sold from time to time by the selling stockholders (collectively, the ("<u>Selling Stockholders</u>")) named in the Prospectus, as supplemented by the Prospectus Supplement No. 1, dated April 3, 2014, and Prospectus Supplement No. 2, dated August 26, 2015 (collectively, the "<u>Prior Prospectus Supplements</u>"). For information on the Selling Stockholders, please see the section entitled "Selling Stockholders" beginning on page 3 of the Prospectus, and in the Prior Prospectus Supplements and this Prospectus Supplement. This Prospectus Supplement is part of, and should be read in conjunction, with the Prospectus and the Prior Prospectus Supplements.

This Prospectus Supplement is being filed to update the original table of Selling Stockholders in the Prospectus and the Prior Prospectus Supplements with respect to certain changes in beneficial ownership that have occurred since the date of the Prospectus and the Prior Prospectus Supplements. This Prospectus Supplement is not complete without, and may not be delivered or utilized except in connection with, the Prospectus and the Prior Prospectus Supplements. In addition, this Prospectus Supplement proportionately reduces the number of shares of Common Stock covered by the Prospectus as a result of the Company's one-for-eight reverse stock split effective March 31, 2017. This Prospectus Supplement supersedes the information contained in the Prospectus and the Prior Prospectus Supplements.

Our Common Stock trades on the Nasdaq Capital Market under the symbol "WHLR." On May 18, 2017, the last reported sale price of our common stock on the Nasdaq Capital Market was \$9.47 per share.

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Investing in our common stock involves significant risks. See "Risk Factors" on page 3 of the Prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of our securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this Prospectus Supplement is May 19, 2017

SELLING STOCKHOLDERS

The table of Selling Stockholders in the Prospectus lists Richard Wheeler as beneficially owning 2,011 shares (the "Shares") of Common Stock in our Company upon the exchange of all units of limited partnership interests ("Common Units") in our operating partnership, Wheeler REIT, L.P. (the "Partnership") held by Richard Wheeler. Upon the death of Richard Wheeler, the Partnership incorrectly transferred 2,011 Common Units held by Richard Wheeler to Woodside Capital, LLC ("Woodside"). Accordingly, the Company, the Partnership and Woodside have requested that the Common Units be transferred to Richard Wheeler's estate in the name of Estate of Richard Wheeler, Charles R. Wheeler, Personal Representative (the "Estate"). As of April 18, 2017, Woodside distributed the Common Units to the Estate. The table of Selling Stockholders, as it relates to the shares of Common Stock in our Company beneficially held by the Estate upon the exchange of all Common Units in the Prospectus and the Prior Prospectus Supplements, is hereby updated through the date of this Prospectus Supplement and amended and supplemented to reflect the foregoing.

The following table provides information regarding the Estate and the number of shares of our Common Stock it may offer pursuant to the Prospectus, the Prior Prospectus Supplements and this Prospectus Supplement. Under the rules of the SEC, beneficial ownership includes shares over which the indicated beneficial owner exercises voting or investment power.

The information regarding shares beneficially owned after the offering assumes the sale of all Shares offered by the Estate. The percentage ownership data is based on 8,623,192 shares of Common Stock issued and outstanding as of May 17, 2017.

The Estate has not held any position, office or have any other material relationship with our Company within the past three years. In addition, the Estate is not a broker-dealer or an affiliate of a broker-dealer. Richard Wheeler was the father of Jon Wheeler, the Company's Chief Executive Officer and Chairman.

Name	Shares Owned Immediately Prior to the Offering (2)	Shares Being Offered for Resale Under this Prospectus	Immediately Following the Offering (1)	
			Shares Owned	Percentage (3)
Estate of Richard Wheeler, Charles R. Wheeler, Personal Representative	2,011	2,011	0	*

^{*} Less than one percent common stock outstanding, as applicable.

⁽¹⁾ Assumes the selling stockholder sells all of the common stock being offered by the Prospectus.

⁽²⁾ The number shown represents shares of common stock issuable upon the redemption by the selling stockholder of Units.

⁽³⁾ Percentage calculated based upon the assumption of the exchange of all outstanding Units held by the selling stockholder for shares of common stock.