Filed by AG Mortgage Investment Trust, Inc. pursuant to Rule 425 under the Securities Act of 1933, as amended and deemed filed pursuant to Rule 14a-12 of the Securities Exchange Act of 1934, as amended

Subject Company: AG Mortgage Investment Trust, Inc. Commission File No. 001-35151



October 23, 2023

Dear Fellow Stockholder:

We previously sent you proxy materials for the Special Meeting of Stockholders of AG Mortgage Investment Trust, Inc. to be held on November 7, 2023. **To date, we have not received your vote.** The Board of Directors unanimously recommends voting **FOR** all proposals presented at the Special Meeting in connection with the proposed merger with Western Asset Mortgage Capital Corporation.

To ensure that your shares are represented at the meeting, **please vote TODAY** via the Internet, by telephone or by signing, dating and returning the hard-copy proxy card or voting instruction form. If you received this letter by email you may also vote by simply clicking the "VOTE NOW" button in the accompanying email.

Thank you for your support,

Thomas J. DurkinChief Executive Officer and President

YOUR VOTE IS IMPORTANT:

If you have any questions about the Special Meeting or need assistance in voting your shares, please call our proxy solicitor,

INNISFREE M&A INCORPORATED TOLL-FREE at (877) 750-8312

Important Additional Information and Where to Find It

In connection with the proposed Merger, MITT has filed with the SEC a registration statement on Form S-4 (File No. 333-274319), which was declared effective by the SEC on September 29, 2023. The Registration Statement includes a prospectus of MITT and a joint proxy statement of MITT and WMC (the "joint proxy statement/prospectus"). The joint proxy statement/prospectus contains important information about MITT, WMC, the proposed Merger and related matters. MITT and WMC also expect to file with the SEC other documents regarding the Merger. The Merger is being submitted to the stockholders of MITT and WMC for their consideration. The definitive joint proxy statement/prospectus was sent to the stockholders of MITT and WMC, and contains important information about MITT, WMC, the proposed Merger and related matters. This communication is not a substitute for any proxy statement, registration statement, tender or exchange offer statement, prospectus or other document MITT or WMC may file with the SEC in connection with the proposed Merger and related matters. INVESTORS AND SECURITY HOLDERS ARE ADVISED TO READ THE REGISTRATION STATEMENT ON FORM S-4 AND THE RELATED JOINT PROXY STATEMENT/PROSPECTUS (INCLUDING ALL AMENDMENTS AND SUPPLEMENTS THERETO) AND OTHER RELEVANT DOCUMENTS THAT ARE FILED OR WILL BE FILED BY MITT AND WMC WITH THE SEC CAREFULLY AND IN THEIR ENTIRETY BECAUSE THEY CONTAIN IMPORTANT INFORMATION ABOUT MITT, WMC AND THE PROPOSED MERGER. Investors and security holders may obtain copies of these documents free of charge through the website maintained by the SEC at www.sec.gov. Copies of the documents filed by MITT with the SEC are also available free of charge on MITT's website at www.agmit.com. Copies of the documents filed by WMC with the SEC are also available free of charge on WMC's website at www.westernassetmcc.com.

Participants in the Solicitation Relating to the Merger

MITT, WMC and certain of their respective directors and executive officers and certain other affiliates of MITT and WMC may be deemed to be participants in the solicitation of proxies from the common stockholders of WMC and MITT in respect of the proposed Merger. Information regarding WMC and its directors and executive officers and their ownership of common stock of WMC can be found in WMC's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on March 13, 2023, and in its definitive proxy statement relating to its 2023 annual meeting of stockholders, filed with the SEC on May 2, 2023. Information regarding MITT and its directors and executive officers and their ownership of common stock of MITT can be found in MITT's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on February 27, 2023, and in its definitive proxy statement relating to its 2023 annual meeting of stockholders, filed with the SEC on March 22, 2023. Additional information regarding the interests of such participants in the Merger is included in the joint proxy statement/prospectus and other relevant documents relating to the proposed Merger filed with the SEC. These documents are available free of charge on the SEC's website and from MITT or WMC, as applicable, using the sources indicated above.

No Offer or Solicitation

This communication and the information contained herein shall not constitute an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No offering of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act, as amended (the "Securities Act"). This communication may be deemed to be solicitation material in respect of the proposed Merger.

Forward-Looking Statements

This Current Report on Form 8-K contains certain "forward-looking" statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, as amended. MITT and WMC intend such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995 and include this statement for purposes of complying with the safe harbor provisions. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates," "will," "should," "may," "projects," "could," "estimates" or variations of such words and other similar expressions are intended to identify such forward-looking statements, which generally are not historical in nature, but not all forward-looking statements include such identifying words. Forward-looking statements regarding MITT and WMC include, but are not limited to, statements related to the proposed Merger, including the anticipated timing, benefits and financial and operational impact thereof; other statements of management's belief, intentions or goals; and other statements that are not historical facts. These forward-looking statements are based on each of the companies' current plans, objectives, estimates, expectations and intentions and inherently involve significant risks and uncertainties. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of these risks and uncertainties, which include, without limitation, risks and uncertainties associated with: MITT's and WMC's ability to complete the proposed Merger on the proposed terms or on the anticipated timeline, or at all, including risks and uncertainties related to securing the necessary stockholder approval from WMC's and MITT's respective stockholders and satisfaction of other closing conditions to consummate the proposed Merger; the occurrence of any event, change or other circumstance that could give rise to the termination of the Merger Agreement; risks related to diverting the attention of MITT and WMC management from ongoing business operations; failure to realize the expected benefits of the proposed Merger; significant transaction costs and/or unknown or inestimable liabilities; the risk of stockholder litigation in connection with the proposed Merger, including resulting expense or delay; the risk that MITT's and WMC's respective businesses will not be integrated successfully or that such integration may be more difficult, time-consuming or costly than expected; and effects relating to the announcement of the proposed Merger or any further announcements or the consummation of the proposed Merger on the market price of MITT's or WMC's common stock. Additional risks and uncertainties related to MITT's and WMC's business are included under the headings "Forward-Looking Statements" and "Risk Factors" in MITT's and WMC's Annual Report on Form 10-K for the year ended December 31, 2022, the joint proxy statement/prospectus and in other reports and documents filed by either company with the SEC from time to time. Moreover,

other risks and uncertainties of which MITT or WMC are not currently aware may also affect each of the companies' forward-looking statements and may cause actual results and the timing of events to differ materially from those anticipated. The forward-looking statements made in this communication are made only as of the date hereof or as of the dates indicated in the forward-looking statements, even if they are subsequently made available by MITT or WMC on their respective websites or otherwise. Neither MITT nor WMC undertakes any obligation to update or supplement any forward-looking statements to reflect actual results, new information, future events, changes in its expectations or other circumstances that exist after the date as of which the forward-looking statements were made, except as required by law.