Supplement dated May 18, 2021

To Prospectus Supplement dated May 12, 2020 (To Prospectus dated April 1, 2020)



Up to \$160,000,000 Additional Shares of Common Stock

This supplement (this "Supplement") supplements that certain prospectus supplement, dated May 12, 2020 (the "Prospectus Supplement"), relating to the offer and sale of shares of common stock, par value \$0.001 per share ("common stock"), of Gladstone Land Corporation (the "Company") from time to time through the sales agents named therein or directly to the sales agents, acting as principals. Sales of our common stock, if any, pursuant to this Supplement, the Prospectus Supplement and the accompanying prospectus, dated April 1, 2020 (the "Prospectus"), will be made in sales deemed to be "at the market offerings" as defined in Rule 415 under the Securities Act of 1933, as amended. Under the terms of the Sales Agreements, we also may sell shares to a Sales Agent as a principal for its own account at a price agreed upon at the time of sale. This Supplement should be read in conjunction with the Prospectus Supplement and the Prospectus. Capitalized terms used and not defined herein shall have the meanings ascribed to such terms in the Prospectus Supplement.

This Supplement is being filed to reflect an increase in our existingat-the-market offering program to allow for the issuance of an additional \$160,000,000 of our common stock from time to time through the Sales Agents through an amendment of the Sales Agreements dated as of the date hereof. All other material terms of the offering and the Sales Agreements remain unchanged. As of the date of this Supplement, we have sold 5,825,142 shares of our common stock under the Sales Agreements for gross proceeds of approximately \$100,000,000, leaving approximately \$160,000,000 available to be offered by this Supplement, the Prospectus Supplement and the Prospectus. On May 17, 2021 the last reported sale price of our common stock on Nasdaq was \$24.52 per share. You are urged to obtain current market quotations of our common stock.

We are a "smaller reporting company" under applicable federal securities laws, and, as such, we are subject to reduced public company reporting requirements. Investing in shares of our common stock involves substantial risks that are described in the "Risk Factors" sections beginning on page S-12 of the Prospectus Supplement, on page 7 of the Prospectus and discussed in our Annual Report on Form 10-K for the year ended December 31, 2020, and other reports and information that we file from time to time with the Securities and Exchange Commission (the "SEC"), which are incorporated by reference into this Supplement, the Prospectus Supplement and the accompanying prospectus.

Neither the SEC nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.



Ladenburg Thalmann

The date of this supplement is May 18, 2021